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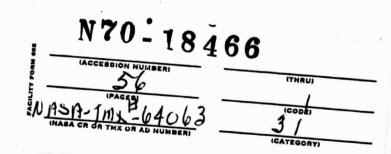
Produced by the NASA Center for Aerospace Information (CASI)

GP-804 December 19, 1969



JOHN F. KENNEDY SPACE CENTER

APOLLO 12
WATER SERVICING



APOLLO 12 WATER SERVICING

PREPARED BY

TWA ENVIRONMENTAL HEALTH ENGINEERING

IRONMENTAL HEALTH ENGINEER

V. E. CHRISTENSEN CHIEF, MEDICAL SERVICES BRANCH

MGR., ENVIRONMENTAL HEALTH ENGR.

CHIEF, ENVIRONMENTAL CONTROL SYS.

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APOLLO 12 WATER SERVICING ALTITUDE CHAMBER TESTS

PURPOSE:

THIS REPORT IS A COMPLETE DOCUMENTATION OF THE WATER SERVICING FOR THE APOLLO 12. INCLUDED IS A DISCUSSION OF OPERATIONAL OR HARDWARE INTERFACE PROBLEMS ENCOUNTERED WITH A COPY OF ALL PERTINENT SAMPLE REPORTS.

SCOPE:

THIS WORK COVERS A PERIOD EXTENDING FROM MAY 2, 1969, TO JUNE 18, 1969, FOR THE CHAMBER TESTS AND OCTOBER 10, 1969, TO NOVEMBER 13, 1969, FOR THE LAUNCH COUNTDOWN.

ALTITUDE CHAMBER TESTS

S/C 108 (COMMAND MODULE)

MAY 23, 1969--SEA LEVEL SIMULATED TEST NO. 1 BACK-UP CREW MAY 28, 1969--SEA LEVEL SIMULATED TEST NO. 2 PRIME CREW JUNE 3, 1969--UNMANNED ALTITUDE CHAMBER TEST JUNE 7, 1969--ALTITUDE CHAMBER TEST NO. 1 PRIME CREW JUNE 10, 1969--ALTITUDE CHAMBER TEST NO. 2 BACK-UP CREW

LM-6 (LUNAR MODULE)

June 3, 1969--Sea Level Simulated Test No. 1 Prime Crew June 6, 1969--Sea Level Simulated Test No. 2 Back-up Crew June 11, 1969--Unmanned Altitude Chamber Test June 13, 1969--Altitude Chamber Test No. 1 Prime Crew June 16, 1969--Altitude Chamber Test No. 2 Back-up Crew June 17, 18, 1969--Unmanned Altitude Chamber Tests

LAUNCH COUNTDOWN

S/C 108 (COMMAND MODULE)

November 6, 1969, Sterilization of Water System November 7, 1969, Final Fill of Potable Tank for Launch November 13, 1969, T-24 hour Sampling

LM-6 (LUNAR MODULE)

November 3, 1969, Sterilization of Water System
November 3, 1969, Final Fill of Potable Tanks for Launch
November 10, 1969, T-4 day Sampling
November 12, 1969, T-24 hour Sampling

LAUNCH WAS NOVEMBER 14, 1969, AT 1122 HOURS.

THE SCOPE OF WATER SERVICING INCLUDES THE VERIFICATION OF FACILITY DEMINERA-LIZED WATER, GROUND SUPPORT EQUIPMENT WATER UNITS (GSE), LUNAR MODULE (LM), COMMAND MODULE (CM) SPACECRAFT, PORTABLE LIFE SUPPORT SYSTEM (PLSS), LIQUID COOLING GARMENT (LCG) AND STERILIZATION OF WATER DISPENSERS (WD). VERIFICATION OF THESE SYSTEMS REQUIRES CHEMICAL, MICROBIOLOGICAL AND PARTICULATE ANALYSIS. ALL ANALYSES WERE PERFORMED BY ENVIRONMENTAL HEALTH ENGINEERING (EHE) IN THE ENVIRONMENTAL HEALTH LABORATORY LOCATED IN THE OCCUPATIONAL HEALTH FACILITY.

ANALYSIS:

THE SPACECRAFT'S WATER SYSTEMS WERE ANALYZED TO PF SPEC-1A AND LATEST REVISION--1B DATED JUNE 25, 1969. THE PLSS AND LCG WERE VERIFIED BY MSC-C-27 AND THE WATER DISPENSER WAS STERILIZED BY CLEANING PROCEDURE CSD-A-872, REVISION A AND B.

Collection of samples was carried out by Environmental Health Engineering personnel in all imstances and returned to the laboratory for analysis except for pH and Electrical Conductivity which were performed on site as required.

Samples were collected by means of a combination of EHE equipment, containers and special containers furnished by MSC called Apollo Water Sampling Devices (AWSD). The Ionic Species determinations were performed by Atomic Absorption.

RESULTS:

RESULTS WERE REPORTED IMMEDIATELY IN THE CASE OF ON-SITE ANALYSES AND WITHIN TWENTY-FOUR HOURS BY PHONE ON ALL OTHERS WITH THE WRITTEN REPORT PUBLISHED AFTER THE FINAL RESULTS WERE OBTAINED ON THE BACTERIAL SAMPLES. ANY RESULTS WHICH DEVIATED FROM NORMAL WERE REPORTED TO THE APPROPRIATE TEST CONDUCTOR AND MEDICAL PERSONNEL AS SOON AS THEY WERE AVAILABLE.

DISCUSSION:

CHAMBER TESTS

None of the analysis reports failed the specifications during the entire Chamber Tests except for Sterility requirements, which were expected due to the Lack of a bactericide.

THERE WERE DETECTABLE INCREASES OF THE IONIC SPECIES FOR NICKEL, MAGNESIUM AND ZINC IN THE COMMAND MODULE USE PORTS. THIS CONDITION FOLLOWS THE USUAL PATTERN EXPERIENCED IN THE PREVIOUS SPACECRAFTS.

THE STERILIZATION OF THE WATER DISPENSER PROCEDURE WAS MODIFIED DURING THIS PERIOD BY INCREASING THE IODINE BACTERICIDE SOLUTION TO (80-100) PARTS PER MILLION (PPM). THIS INCREASE FROM 20-30 PPM WAS NECESSARY BECAUSE OF THE RECENT AND RATHER CONSISTENT FAILURES EXPERIENCED. THE INCREASE IN IODINE CONCENTRATION WAS THE ONLY CHANGE FROM THE METHOD USED PREVIOUSLY AND THE RESULTS LOOK QUITE PROMISING AT THIS TIME. THE PACKAGING OF THE WATER DISPENSER AS MENTIONED IN PREVIOUS REPORTS STILL IS A PROBLEM AREA. THE 2-MIL ACLAR BAGS USED TO BAG THE DISPENSERS AFTER THE STERILIZATION PROCEDURE WILL NOT REMAIN VACUUM SEALED FOR ANY PERIOD OF TIME. STEPS ARE PRESENTLY BEING MADE TO EITHER USE A LAMINATED MATERIAL OR TEFLON FEP.

LAUNCH COUNTDOWN

INABILITY TO MEET THE STERILITY REQUIREMENT OF THE PF SPEC-1B CONTINUES TO BE THE SOLE TROUBLE AREA FOR COMMAND MODULE SAMPLES. THIS SITUATION DOES NOT

EXIST FOR THE LUNAR MODULE SINCE TO DINE RESIDUAL IS MAINTAINED IN THE POTABLE WATER SYSTEM DURING THE ENTIRE WATER SERVICING. DUE TO THE CORROSIVE PROPERTY OF THE CHLORINE USED AS THE BACTERICIDE IN THE COMMAND MODULE, THE POTABLE WATER IS LOADED WITHOUT ANY ANTIBACTERIAL AGENT UNTIL A TIME JUST PRIOR TO LAUNCH. THIS PROCEDURE HAS CONSISTENTLY CAUSED THE WATER SAMPLES COLLECTED FROM THE COMMAND MODULE TO FAIL THE STERILITY REQUIREMENTS OF THE SPECIFICATION.

THE ABOVE SITUATION DEPICTS THE ONLY FAILURE ENCOUNTERED DURING THE WATER SERVICING FOR LAUNCH COUNTDOWN OF EITHER SPACECRAFT.

AN ADDITIONAL TROUBLE AREA DEVELOPED AS A RESULT OF THE EARLY LOADING OF WATER ABOARD THE LUNAR MODULE. THIS EARLY LOADING (AT T-10 DAYS) REQUIRED ADDITIONAL SAMPLING AT T-7 DAYS. THE ADDITIONAL SAMPLING STEP AT T-7 DAYS REDUCED THE AVAILABLE VOLUME FOR THE T-24 HOUR SAMPLE. MEASURES ARE PRESENTLY BEING TAKEN TO PREVENT THIS PROBLEM ON FUTURE LOADINGS.

THE DEPLETION RATE OF IODINE IN THE LUNAR MODULE-6 POTABLE WATER DESCENT TANK WAS CONSIDERABLY LESS THAN ANTICIPATED. THE DEPLETION DURING LAUNCH COUNTDOWN WAS APPROXIMATELY 0.2 PPM/DAY COMPARED TO 1 PPM/DAY DEMONSTRATED ON PREVIOUS SPACECRAFTS. This shift in rate of depletion may influence the initial load Concentration which is based on the amount required on final consumption some 24 weeks later on the lunar surface.

	SAMPLE	PLE VOLUMES FOR KSC AND MSC (2)	WD HSC(2)		TABLE 1
ANALYSIS	TEST POINT ONE FACILITY D.1.	TEST POINT TWO G. S.E. UNIT	TEST POINT THREE C/M DRINK GUN HOT PO		TEST POINT THREE CONT.
ELECTRICAL CONDUCTIVITY	1 - ON SITE	1 - 0n Site	None Required	NONE REQUIRED	NONE REQUIRED
H.	1 - ON SITE	1 - 0n SITE	PERFORM FROM Taste & Odor Volume at Lab	PERFORM FROM. Taste & Odor Volume at Lab	PERFORM FROM TASTE & ODOR VOLUME AT LAB
STERILITY	1 - 10 ML	1 - 500 HL .	1 - 10 ML	1 - 500 ML	1 - 500 ML
PARTICULATE	NONE REQUIRED	1 - 500 нг	1 - 500 ML	None Required	1 - 500 нг
TOTAL RESIDUE	1 - 1,000 н.	1 - 1,000 ML Performed From Taste & Odor Volume	1 - 500 ML Performed From Taste & Odor Volume	NONE PERFORMED	1 - 500 ML Performed From Tasté & Odor Volume
TASTE AND ODOR Turbidity Color, True Bactericide Ionic Species	NONE REQUIRED	2 ~ 2,000 ML ⁽³⁾	1 - 2,000 HL (1)	1 - 1,000 ML(1)	1 - 2,000 HL),(4
TOTAL VOLUME	1,500 ML 10 ML (KSC)	2,000 ML (MSC 3,000 ML 10 ML (KSC)	2,000 HL (KSC) 10 HL (MSC) 1,000 HL (MSC)	1,000 HL (KSC) 10 HL (MSC) 500 HL (MSC)	2,000 ML (KSC) 10 ML (MSC) 1,000 ML (MSC)

NOTES: 1. SAMPLE IS SPLIT FOR SHIPMENT TO MSC.

^{2.} ALL SAMPLES COLLECTED IN SAMPLE CONTAINERS FURNISHED BY MSC, EXCEPT THE PARTICLE SAMPLES.

^{3.} NO SAMPLE IS TAKEN FOR MSC ON L/M CHAMBER RUNS.

^{4.} IODINE CONCENTRATION MUST BE VERIFIED ON-SITE AT SAMPLING TIME.

APPENDIX A

CHRONOLOGY OF APOLLO 12 WATER SERVICING FOR LAUNCH COUNTDOWN

DATE	HOUR	EHE LOG NO.	ANALYSIS REQUESTED
10/10/69	2400	6910-18	VERIFICATION OF FACILITY DEMINERALIZER SYSTEM
10/21/69		6910 - 40	G.S.E., T.P2 PRE I OF LM-6
11/3/69	0900	6911-1	lodine Injection, Verification in G.S.E.
11/3/69	1430	6911-2	G.S.E. T.P2 Post I of LM-6
11/3/69	1300	6911-3	12 RESIDUAL IN LM-6 FOR STERILIZATION SOAK
11/3/69	1730	6911-4	DESCENT TANK OF LM-6 FINAL FILL
11/4/69	1700	6911-8	12 VERIFICATION IN DESCENT TANK, LM-6
11/5/69	1300	6911-9	G. S.E. T.P2 PRE CL2 OF S/C 108
11/5/69	1500	6911-11	CL2 INJECTION AND VERIFICATION
11/6/69	0300	6911-12	CL2 RESIDUAL IN SOAK SOLUTION OF S/C 108
11/6/69	1130	6911-13	G. S.E. T.P2 POST CL2 OF S/C 108
11/7/69	0800	6911-15 G,H	POTABLE TANK OF S/C 108 FINAL FILL
11/10/69	1100	6911-22	DESCENT TANK T-4 DAYS OF LM-6
11/12/69	1630	6911-31	DESCENT TANK T-24 HOURS OF LM-6
11/13/69	0500	6911-32 G,H	POTABLE TANK T-24 HOURS OF S/C 108





	lysis rieport	1.7.21
Requestor, Organization, Mail Code	Request Date OCTOBER 10, 1 60	
R. DAMBERT, GRUMMAN GAEC-47	Phone 7-2045	
Sample Description	Analysis Requested (Specification Required)	-
APOLLO WATER FROM FACILITY WATER DEMINERALIZER SYSTEM	PF SPEC-1B	
Location PAD 33A - 3C LEVEL		
Received by GUENTHER	Date 16/16/67 (2400) Log Number 6	10-10
Priority: Routine A.	S.A.P Emergency	
ANALYSIS:		
PH = 7.2 @ 25°C		
ELECTRICAL CONDUCTIVITY = .28 MICROMHOS/	ch @ 25°C	
TOTAL RESIDUE = 1.4 HG/L		4
STERILITY:		
TOTAL BACTERIA = 18,800 COLONIES/100	ML.	
COLIFORM COUNT = NEGATIVE		
AMAEROBIC AMALYSIS = BEGATIVE		
YEAST AND HOLDS = NEGATIVE		
THIS PASSES THE REQUESTED ANALYSIS.		
CC: EO VRIGHT, LS-BIG-32		
•		*
	*	
• •	· · · · · · · · · · · · · · · · · · ·	
Buck /B	OCTOBER 14, 1	69
Analyst 7 7	Date Completed	
P. LATORE , MGR. , ENVIRONMENTA	Reference Notebook	





Analysi	s Heport				
Requestor, Organization, Mail Code	Request Date	Octobe	21, 106		71.
R. JANDERT GAEC-47	Phone	867-23	; 5		
Sample Description	Analysis Requ	ested (Specificati	on Required)		4
POLLO POTABLE WATER FROM CSE AT	DE SDE	C-1B to Test	Pote 2		
LM-6, APOLLO 12, PAE I ₂	77 57 6	0-15 10 1231			
Location				*	
PAD 31', SC LEVEL	•				
Received by McUrrantes	Date 1. /21/C	;	Log Number	6.11(l)	rs.J
Priority: Routine A.S.	A.P		Emergency_		
ANALYSIS:		TOUTE SPEC			
ELECTRICAL COMPUCTIVITY = 0.2 MICHAMIOS/C	, 35°C	CADMIUM		L.C.5	Mr./I
	M 🤄 25 C	CHECHIUM		0.05	
PH = 7.4 ^② 25 ⁶ C		COPPER	UHDER		MG/L
To AL RESIDUE = UNBER .5 HG/L .		lacu	UNDER		
·	•	LEAD .	UNDER		
Fixed Residue = Under .5 MG/L		MANGANESE			
TASTE AND COOR = None (THRESHOLD No. 3		ME CURY	UHDER		
		HICKEL	UHDER	6.63	MG/ L
Tundidity = .14 Units		SILVER	UNDER		MG/ L
Colon, Taue = under 5 Units		Zinc	OHDER	L.03	NG/ L
PARTICULATES/500 HL		MAGNESIUM			
		CDIDE	OH OF I		MG/L
0-10 MICHOUS = PASSES		LUMINUM			MG/L
1: -25 microus = 1		POTASSIUM		-	
25-50 MICRORS = 0 50-1-0 MICRORS = 0		SILICON	UIIDER	0.5	MG/L
OVER 100 MICHORS # 0		STERILITY:			
CC: EO MAIGHY, LS-ENG-32 HSC PREVENTIVE MEDICINE DIV., JC-7	.	COLIFOLM Annerosi	CTERIA = 3 COUNT = 11 C AHALYSIS D MGLOS =	EGA IVE	TIVE
MSC Cher Systems Division, EC-3 MSC LAUNCH SITE MEDICA. Ops. Branch,	, DJK				
Analyst Buck (1)	Date C	Completed 1:/	23/6)		
Approved by J. L. Jan	Refere	nce Notebook			
9 LaTo pp. tles. Enverones	1744 He	Euganemana.			

TWA

KSC ENVIRONMENTAL HEALTH ENGINEERING



	T			
Requestor, Organization, Mail Code	Request Date	Поченв	ec 3, 1000	· Pal
R. DANDERT, GAEC GAEC-47	Phone	8 67 - 60	7 0	ě
ample Description	Analysis Requested	(Specification	Required)	
APOLLO POTABLE MATER FOR TODINE SOAR SOLUTION IN UN-5 OF APOLLO 12	VERTITION SUPPO		10	
ocation	1			
PAD 30A, 3C LEVEL				100
Received byBuck, Mct/mater	Date11/3/6.1	(L 700) La	g Number	011-1
Priority: Routine A.S.	A.P	Er	nergency	
ANALYSIS:				
,				
leave = 20 mg/s	• ,.	2		
IODINE = 30 MG/L				
. 10 8110 20				
cc: ED VRIGHT, LS-ENG-32				
•				4
•		•		
aB				
Analyst Duck	_ Date Complet	ed Nevenber	R 4, 1 6)	
	•			





Analysis Report Requestor, Organization, Mail Code Request Date November 3, 1 6 Phone R. JAMBERT 7-6070 GAEC-41 Analysis Requested (Specification Required) Sample Description APOLLO PO ABLE WATER FROM G. S.E. POST 12 FOR FIRML FILL OF LIL-G OF APOLLO 12 PF SPEC-18 to Test Point 2 Location PAD 3 A. 3C LEVEL Date 11/3/60 (1430) Log Number <u>111-2</u> Buck, McMmanaa _ A.S.A.P. _ Priority: Routine _ . Emergency_ IONIC SPECIES: ANALYSIS: ELECTRICAL CONDUCTIVITY = 6.46 MICHUMMOS @ 25°C CADMIUM UNDER U.005 MG/L CHRONIUM UNDER 0.65 MG/ L PH = 6.0 9 25°C Coppen UNDER 0.05 ng/L TOTAL RESIDUE = 1. + MG/L Laon UNDER 0.1 MG/L UNDER 0.05 MG/L FIXED RESIDUE = .5 HOL MANGAMESE UNDER 0.01 MG/L un an 0.005 TASTE AND ODOR = HOME @ THRESHOLD No. 3 MERCURY MC/L NICKEL UNDER 0.63 HG/ L TURBIDITY = 0.2 Units UMDER U.05 SILVER MG/L Zinc UNDER L.03 Color, TRUE = UNGER 5 Units nc/L MAGNESIUM EQUALS 0.664 HG/1. PARTICULATES/500 ML · loning wices 0.1 ng/1. UNDER U.5 0-16 HICRONS = PASSES ALUMINUM HG/L POTASSIUM UNDER 0.05 110/1 10-25 microns = 28 UNDER U.5 25-50 MICCONS = 14 SILICA mc/L 50-100 MICRORS = 3 STERIL! TYS OVER 100 MICROUS = .1 TOTAL BACTERIA = HEGATIVE COLIFORM COUNT = NEGATIVE THIS REPORT PASSES, THE REQUESTED ANALYSIS. ANAERODIC ANALYSIS = NECATIVE YEAST AND MOLUS = NEGATIVE cc: Eo WRIGHT, LS-ENG-32 MSC PREVENTIVE MEDICINE DIV., 3C-7 HSC CREW SYSTEMS JUISION, EC-3 MSC LAURCH SITE MEDICA: OPS. BRANCH, DDK GUENTHER/ UDED SON/BUCK 72 November 5, 196) Date Completed_ Analyst .

P. LATORRE, FOR., INVIRONMENTAL HEALTH ENGINEERING

Reference Notebook

Approved by .





	Analysis Report
Requestor, Organization, Mail Code	Request Date November: 3, 1960
R. DANDERT, GAEC GAEC-41	Phone 7-€07€
Sample Description	Analysis Requested (Specification Required)
APOLLO MATER FROM ASCERT AND DESITABLES OF LM-6 DURING STERILIZATION	
Location	
PAD 30A, SC LEVEL	
Received by	Date 11/3/67 (130.) Log Number 6711-3
Priority: Routine(Due Date)	A.S.A.P. Emergency
ANALYSIS:	LODINE CONCENTRATION_MG/L_
TIME	DESCENT TANK SCENT TANK
13 00	2 * -
1330	2) 2)
1540	2)
1353	2) 2)
1404	2) . 2)
*THIS SAMPLE RESULT WAS NOT ACCE AND WAS REPEATED.	PTABLE TO GAEC Q.C. ON STATION AT THE LM HATCH
CC: ED MEIGHT, LS-ENG-32	
	-
	,
Buck 1/2	
Analyst Buck	Date Completed November 5, 176





Requestor, Organization, Mail Code	Request Da	te Novemb	en 3, 1961	
R. DANDERT	Phone			
GAEC 41		7-6070		
Sample Description	Analysis Re	quested (Specifica	ation Required)	
APOLLO POTABLE WATER FROM			•	
DESCENT TANK OF LIA-S OF APOLLO	i			
12 FOR FINAL FILL	PF SPEC	18 TO TEST P	OINT 3	
Location	7			
PAD 39A, 3C LEVEL				
Received by	Date 11/3/6	(1730)	Log Number 6)11	_l;
Priority: Routine A.	S.A.P		_ Emergency	
ANALYSIS:		IONIC SPECI	ES:	
PH = 5.0 ⊕ 25°C		CADMIUM	UNDER 0.005	MG/L
		CHROMIUM	UNDER 6.05	
TOTAL RESIDUE = 1.8 MG/L		COPPER		
TASTE AND COOR = NONE THEESHOLD ODOR	No. 5	Coppen Inch	UNDER 0.1	
T		LEAD	UNDER 0.05	HG/L
Tunbibity = 0.2 Units	•	MANGARESE		MG/L
Colon, TRUE = 65 Uni.s		MERCURY	UNDER 0.005	
PA: TICULATE/500 NL		MICKEL	EQUALS 0.03	-,-
		SILVER	unden 0.05	MG/L
0-10 MICROHS = 16		Zinc	UNDER 0.03	MG/L
10-25 MICRONS = 82		MAGNESIUM		
25-50 HICROUS = 22		Toolog	EQUALS 1.5	HC/L
50-100 HICRONS = 9		ALUMINUM	UNDER 0.5	MG/L
100-250 MICRONS = 8		POTASSIUM		
OVER 250 MICRONS = 0		SILICA *IODINE	UNDER 0.5 EQUALS 19	MG/L
THIS REPORT PASSES THE REQUESTED ANALY	SIS.		EQUALS 13	MU/L
•	٠,	STERILITY:	Haasas	
En Marcus 16 ENC 22			TERIA = NEGATIV Count = Negativ	
CC: ED WRIGHT, LS-ENG-32	7		HALYSIS = HE	
MSC PREVENTIVE MEDICINE DIV., DC-1 MSC CREW Systems DIV., EC-3	•		Molds = NEGAT	
MSC LAUNCH SI E MEDICAL OPS. BRAN	cu aak			
HOC EAUGER SI E REDICAL OFS. DANIE	on, out		CENTRATION IN AS ED AT THE SAME S	
AnalystANDERSON/GUENTHER	Date (Nov	/EHDER 5, 1969	
Approved by		ence Notebook		
YAR. LATGERE. HGR. EUVIRONMENTA	L HEALTH ENG	INEERING		





ENVIRONMENTAL H	IEALTH ENGIN	IEERING		- A.	9
Requestor, Organization, Mail Code	Request Date	November	5, 1969	9	575
H. CROSKEY, NR ZK-86	Phone	7-3793			
Sample Description	Analysis Reques	sted (Specification	Required)	1012
Apollo potable water from G.S.E. Pre-Cl ₂ for S/C 108 of Apollo 12	PF SPEC 1B	TO TEST POIN	т 2		
Location					
PAD 39A, 4C LEVEL					
Received by WRIGHT					
Priority: Routine A.S.A					
ANALYSIS:		IONIC SPEC			
ELECTRICAL CONDUCTIVITY = .37 MICROMHOS/	/cm @ 25°C	CADMIUM			
PH = 6.3 @ 25°C		CHROMIUM		200	
TOTAL RESIDUE = UNDER 0.5 Mg/L	•	COPPER I RON			
Fixed Residue = under 0.5 Mg/L		LEAD	UNDER	0.05	MG/L
		MAN GANESE			111111111111111111111111111111111111111
TASTE AND ODOR = None @ THRESHOLD No. 3		MERCURY			
TURBIDITY = 0.15 UNITS		NICKEL Silver	UNDER	The Contract	MG/L
Color, TRUE = UNDER 5 UNITS		ZINC	UNDER		MG/L
PARTICULATES/500 ML		MAGNESIUM			MG/L
	•	CHLORIDE	EQUALS	0.0	MG/L
0-10 MICRONS = PASSES	Q.	ALUMINUM			
10-25 MICRONS = 44		POTASSIUM			MG/L
25-50 MICRONS = 10		SILICA	UNDER	0.5	MG/L
50-100 MICRONS = 4 over 100 Microns = 2		STERILITY:			
OVER 100 HICKORS - 2	••				10
THIS REPORT PASSES THE REQUESTED ANALYS	is.	TOTAL BA	1 Count =	= NEGAT	TIVE
cc: Ed Wright, LS-ENG-32		ANAEROBI			
MSC PREVENTIVE MEDICINE DIV., DC-7		YEAST AN	D MOLUS	= 12 0	:0L/ 150
MSC CREW SYSTEMS DIV., EC-3					
MSC LAUNCH SITE MEDICAL OPS. BRANCH	ı, DDK				
North American Rockwell, Downey, Ca	ALIF.		20		
	•				
Analyst Guenthe R/Buck(B)		Nover	1BER 11,	1969	
Analyst Guentle K/ Buc N///	_ Date Comp	oleted	DEN,	1302	

P. LATORRE, MGR., ENVIRONMENTAL HEALTH ENGINEERING





An	alysis Report	
Requestor, Organization, Mail Code	Request Date	VEMBER 5, 1 69
H. CROSKEY, NR ZK-86	Phone 7-	5182
CHLCRINE CONCENTRATION IN SOAK SOLUTION	Analysis Requested (Specific	ation Required)
AFTER INJECTION IN SODIUM HYPROCHLOLIDE		AT LON
PAD 30 , 4C LEVEL		
Received by ANDERSON		Log Number6011-11
Priority: Routine(Due Date)	A.S.A.P	
NALYSIS:		
CHLOLINE = 8 MG/L		
CC: ED WRIGHT, LS-EIG-32		
꽃이 하는 것이 되는 그렇다?		
Analyst Buck	Date Completed	OVEMBER 10, 1369
11140		

FORM OH-1





Requestor, Organization, Mail Code	Request Date
H. CROSKEY, NR ZK-86	Phone 7-5182
Sample Description	Analysis Requested (Specification Required)
CHLORINE RESIDUAL IN CHLORINE SOAK	
SOLUTION OF S/C 108, APOLLO 12	CHLORINE CONCENTRATION
Location	
PAD 30A, 4C LEVEL	
Received by Mountain McMunater	Date 11/6/69 (0500) Log Number 6911-12
Priority: Routine(Due Date)	A.S.A.P Emergency

ANALYSIS:

CHLORINE CONCENTRATION IN MG/L

	TIME		OK!	nk Gun	HOT PORT	COLD PORT
	0330		•	8	6	6
-	0400			7	6	6
	0430			6	6	6
	0500			6	5	6
	0 53 0	a E		5	5	5

cc: ED WRICHT, LS-ENG-32

	BUCK OR	November 10, 1969
Approved by	P. LATORRE, MGR., ENVIRONMENT	Reference Notebook





- Andrysts					
Requestor, Organization, Mail Code	Request Date	11/6/69			
H. CROSKEYS, NR	Phone				
ZK -86	•	7-3793			
Sample Description	Analysis Request	ed (Specification	Required)		
APOLLO POTABLE WATER FROM G.S.E.					
POST-CHLORINE OF S/C 108 OF					
Apollo 12	PF SPEC 1B	TO TEST POI	NT 2		1
					-
Location		×			ļ
PAD 39A, 4C LEVEL					
Received by ANDERSON/WRIGHT De	ate 11/6/69 (1130)	og Number	6911-1	3
•					
Priority: Routine A.S.A.	.Р	E	mergency_		
ANALYSIS:		IONIC SPEC	I ES:		
ELECTRICAL CONDUCTIVITY = 0.22 MICROMHOS	/cm @ 25 ⁰ C	CADMIUM	UN DE R	0.005	MG/L
PH = 6.3 @ 25°C		CHROMIUM		0.05	MG/L
		COPPER	UNDER	0.05	MG/L
TOTAL RESIDUE = 0.5 MG/L		I RON	UNDER Under	0.1 0.05	MG/L MG/L
FIXED RESIDUE = UNDER 0.5 Mg/L		MANGANESE		0.01	MG/L
TASTE AND ODOR = NONE @ THRESHOLD No. 3		MERCURY	UNDER	0.005	MG/L
TURBIDITY = 0.10 UNITS		NICKEL	EQUALS		MG/L
		SILVER	UNDER	0.05 0.05	MG/L MG/L
Color, TRUE = UNDER 5 UNITS		ZINC Magnesium	UNDER		MG/L
Particulates/500 ML		CHLORIDE	_		MG/L
0-10 MICRONS = PASSES		ALUMINUM	_	0.5	MG/L
10-25 microns = 8		POTASSIUM			MG/L
25-50 MICRONS = 2		SILICA	UNDER	0.5	MG/L
50-100 MICRONS = 0 over 100 MICRONS = 1		STERILITY:			
OVER TOO HICKORS - 1	••	OIERI EIIII			
THIS REPORT PASSES THE REQUESTED ANALYSI	s.	TOTAL BA			
	•	COLIFORM			
cc: ED WRIGHT, LS-ENG-32		ANAEROBI Yeast &	C ANALYS		The state of the s
MSC PREVENTIVE MEDICINE DIV., DC-7 MSC CREW SYSTEMS DIVISION, EC-3		TEAST &	MOLDS =	NEGATIVI	•
MSC LAUNCH SITE MEDICAL OPS. BRANCH	. DDK				
North American Rockwell, Downey, Car					
Analyst Buck 073	Date Compl		BER 11, 1	707	
American (f. f. 2)					
P. LATORRE, MGR., ENVIRONMENTAL HEA	Reference N				
P. LAIORRE, MGR., ENVIRONMENTAL MEA	LIN LAGINEER				





Analysi	is Report				
Requestor, Organization, Mail Code	Request Da	te Novemb	ER 7, 19	69	
H. CROSKEY, NR ZK-86	Phone	7-5182			
Sample Description	Analysis Re	equested (Specifica	tion Requir	red)	
Apollo potable water from Drink Gun of S/C 108, Apollo 12 for Final Fill	PF SP	EC 1B TO TEST	Point 3		
Location					
PAD 39A, 4C LEVEL				,	
Received byBUCK)ate11/7/	/69 (0800)	Log Num	691 hber	1-15G
Priority: Routine A.S.A	N.P		Emergeno	:y	
(Due Date)					
ANALYSIS:		IONIC SPEC	IES:		
PH = 6.3 @ 25°C		CADMIUM	UNDER	0.005	MG/L
		CHROMIUM	UNDER	0.05	MG/L
TOTAL RESIDUE = UNDER 1 MG/L		COPPER	UNDER	0.05	MG/L
TASTE AND ODOR = NONE @ THRESHOLD ODOR	No. 3	RON	UNDER	0.1	MG/L
TURBIDITY = .04 UNITS		LEAD	UNDER	0.05	MG/L
		MANGANESE	UNDER		MG/L
Color, TRUE = UNDER 5 UNITS		MERCURY Nickel	UNDER	0.005 0.03	MG/L MG/L
PARTICULATE/500 ML		SILVER	EQUALS Under	0.05	MG/L
· 0-10 MICRONS = PASSES		ZINC	UNDER	0.03	MG/L
10-25 MICRONS = 600		MAGNESIUM			MG/L
25-50 MICRONS = 27		CHLORIDE	EQUALS		MG/L
50-100 MICRONS = 2		ALUMINUM	UNDER	0.5	MG/L
100-250 MICRONS = 2		POTASSIUM	UNDER	0.05	MG/L
		SILICA	UNDER	0.5	MG/L
THIS REPORT PASSES THE REQUESTED ANALYS WITH THE EXCEPTION OF STERILITY.	1S,	CHLORINE	UNDER	0.1	MG/L
CC: ED WRIGHT, LS-ENG-32 MSC PREVENTIVE MEDICINE DIV., DC-7		STERILITY:			
MSC CREW SYSTEMS DIV., EC-3		TOTAL BA	CTERIA =	1200 c	DL/150 M
MSC LAUNCH SITE MEDICAL OPS. BRANC North American Rockwell, Downey, C		Coliform Anaerobi Yeast an	C ANALYS	IS = NE	GAT I VE
Analyst Guenz HER/ANDERSON/BUCKats	Date (Completed Nov	EMBER 11	, 1969	
(P+1)	. Jate (Julipioted			

P. LATORRE, MGR., ENVIRONMENTAL HEALTH ENGINEERING







Requestor, Organization, Mail Code	Request Date	Noveme	BER 7, 196	59	
H. CROSKEY, NR ZK96	Phone	7-5182			
Sample Description	Analysis Requ	ested (Specificat	ion Required	1)	
APOLLO POTABLE WATER FROM HOT PORT OF S/C 108, APOLLO 12, FOR FINAL FILL Location	PF SPEC 1B	то Тезт Рог	INT 3		
PAD 39A, 4C LEVEL					
Received by McWHIRTER	11/7/6	9 (0800)	Log Numb	6911-	15H
Priority: Routine ASA					
(Due Date)	\.\· .		. Lineigency.		
ANALYSIS:		IONIC SPEC	IES:		
pH = 6.3 @ 25 ⁰ C		CADMIUM			MG/L
TOTAL RESIDUE = 1 MG/L	• .	CHROMIUM Copper	UNDER	0.05	MG/L MG/L
TASTE AND ODOR = NONE @ THRESHOLD ODOR	No. 3	I. R ON	UNDER	0.1	MG/L
TURBIDITY = .04 UNITS		LEAD	UNDER	0.05	MG/L
Color, True = under 5 Units		Manganese Mercury			MG/L MG/L
COLOR, TRUE - UNDER 5 ONTIS		NICKEL			MG/L
		SILVER	UNDER	005	MG/L
THIS REPORT PASSES THE REQUESTED ANALYS WITH THE EXCEPTION OF STERILITY.	15,	ZINC MAGNESIUM			MG/L MG/L
WITH THE EXCEPTION OF STERRICITY.		CHLORIDE			
cc: Ed Wright, LS-ENG-32	*	ALUMINUM	UNDER	0.5	MG/L
MSC PREVENTIVE MEDICINE DIV., DC-7		POTASSIUM			
MSC CREW SYSTEMS DIV., EC-3	0.04	SILICA			
MSC LAUNCH SITE MEDICAL OPS. BRANC North American Rockwell, Downey, C		CHLORINE	UNDER	0.1	MG/L
NORTH AMERICAN ROCKWELL, DOWNET, C	ALIF.	STERILITY:			
•		TOTAL BAG	CTERIA =	105,000 150 ML	COL/
*		COLIFORM	Count = I		
			C ANALYSI		10 to 15 to
		YEAST AND	D MOLDS =	NEGATIV	/ E
, ,					
	•		*		
Analyst Guent HER/AN DERSON/BUCK 08	- Date Co	mpleted	OVEMBER 1	1, 1969	
Land Market (P. L. Din		- Neart			. 41
Approved by		e Notebook			
P. LATORRE, MGR., ENVIRONMENTAL	HEALTH ENGI	NEEKING			





Requestor,	Organization, Mail Code	Request	Date	MBEI: 13, 1	. 5 .	
ED C	VCLLI, GAEC	Phone				
mec-	51		86	27:5		
Sample De	scription	Analysis	Requested (Specificat	ion Required)		
Apoll	O PO ABLE WITE FROM DESCRIT					
TADK	тинеен и оннов соп	DF	SPEC 18 TO TEST	Po107 3		
Lil	, Product 12, T-14 Hours	''				
Location		1				
	3 / , 3A Level					
		11.	12/ (163.)	Los Number	€ 11.	-31
Received b	1		•			
Priority:	Routine A.S.	A.P		. Emergency_		— I
ANALYSI	 <u>S:</u>		ionic specia	S:		1
-11	<i>L</i> ,6 ○ 25°C		CADRICH	unpen		H 5/ 1
			Cu oniun		L.U.	naz s
	desigue = 1.0 mc/L		. Coppen	EQUALS	ų mi	11 7
TAST	a Aun Odon = Hena (Tumasmet) Coom !	10. 7		OHOER Gader	1 .1 5 . 05	W., : M.√:
Yo o	IDITY = 0.3 Units		Lero Mangarese		51	117
			HE Co. Y		L. L. 5	110/
Cete	Ra veue = 70 Upirs		Henry	EQUALS	C 7	
			SILVER	ULFER	0.99	ar/v
Tars	REPORT PASSES THE REQUESTED MIALYS	15.	Zinc	ONUE :	U•05	HC/T
			Monestun			MW I
			toot s	EQUALS	ა ი.s	11:/1
ccs	En August, LS-SiS-52		ALUMINUM Polassium	BROEN	7.5 (A)T	1977 : 1137 :
	MCC Pheventive Replaine Av., 30-7		POLASSION SILICA	UII EN	6	1107
	MSC CREW SYSTEMS DIV., 25-3 MSC LAURCH SIVE REDICAL UPS. BRANC	n, Jak	leatna	EQUALS		HG/ C
		٠.,	STEELLITY:			
1				TECIA = 08	er sie	
			CELIFUID			re mo
l				HALYSIS		
			YEAST AND)FICIEUT	
ł					VOLUME.	
			· 	 ICIDER 17,	1 76 7	
Analyst _	30CK	- 1	Date Completed		•	
Approved	1 by Jane		Reference Notebook			
Chhiorec	P. LATCHES, Men., Environment	ial Heat	entragarana nr.			





- Analysi	s Neport				
Requestor, Organization, Mail Code	Request Date	Hovenbe	n 13., 196)	
ED CALVELLI, GAEC GAEC-51	Phone	867-294	5		
Sample Description	Analysis Reque	ested (Specification	on Required)		
POLLO POTABLE WATER FROM DRINK CUN, LM-, Apollo 12, Flush Sample (FI:ST 3:0 ML)	PF SPEC 1	B to Test Po	1ut 3		
Location					
PAD 53A, 3C LEVEL					
Received byCuc K	Date 11/12/6	(1030)	Log Number	6 11.	.31
•	A.P		Emergency_		
ANALYSIS:		1001C SPEC	IES:		
pH = 4.8 - 25°C		CADMIUM	EQUAL S	0.01	MG/L
TOTAL RESIDUE = *		CHOOMIUM			Ho/L
TASTE AND COOR = None @ THRESHOLD GOOR N	0. 5	COPPE	EQUALS		MC/ L
		I RON LEAD	UNDER		HG/L
Tumpinity = 0.5 Units		MANGANESE			MG/ L
COLOR, TRUE = UNDER 5 UNITS		MIERCURY			MG/L
,		HICKEL	EQUALS		MG/L
THIS REPORT IS FOR REFERENCE ONLY.		SILVER			HG/L
INIS REPORT IS FOR REFERENCE ONCT.		ZINC	EQUAL\$		HG/L
•		MAGNESIUM			MG/L
		LODIDE	E QUALS		HG/L
CC: ED WRIGHT, LS-ENG-32		POTASSIUM			MG/L MG/L
MSC PREVENTIVE MEDICINE DIV., DC-7		SILICA	UNDER	_	HC/L
MSC CHEW SYSTEMS DIV., EC-3 MSC LAUNCH SIVE MEDICAL OPS. BRANCH	, DOK	#STER ILITY	×.		
*INSUFFICIENT SAMPLE VOLUME.					
"INSUFFICILAL SAMPLE VOLUME.					
AnalystPUCK (ii)	Date Con	npletedNov	MBER 17.	1.767	
Approved by Filip		Notebook			
P. LATOURE, IGR., ENVIRONMEN	TAL HEATH E	NGINEE ING			





Ana	lysis Report				
Requestor, Organization, Mail Code	Request Date	Novembe	ER 13, 1.0	59	
H. Croskey, MAR ZK-86	Phone	867-5182	:	,	
Sample Description	Analysis Requ	ested (Specificat	tion Required	1)	
Apollo po able water from brink cun of SC 108, Ppollo 12, T-24 Hours	PF SPEC	13 to Test	Point 3		
PAD 33A, 4C LEVEL					
Received by MCUNIRTER	Date 11/13/61	(450a)	Log Numb	er_ 6:11-	3 20
	.S.A.P				
ANALYSIS:		IONIC SPEC	ES:		
PH = 6.1 = 25°C		CADMIUM	EQUAL S	0.005	MG/L
TO TAL RESIDUE = 1.2 MG/L		Cicoman		0.05	ng/L
	n - 6	Coppea			
TASTE AND COOR = None @ THRESHOLD COO.	: No. 4	IRCH		0.1	
Tuacioity = 0.5 Units			UNDER	0.05 0.01	
Colon, TRUE = UNDER 5 UNITS		Manganese Hercury			MG/L
			UHUER	0.63	MC/L
PARTICULATE/500 ML		SILVER			MG/ L
0-10 MICRONS = PASSES		Zinc	EQUALS		HO/L
10-25 nichens = 1-40		HACKE STUM	,	_	
25-50 nicrons = 72		CHLORIDE	EQUALS	0.0	MS/L
50-100 Michons = 56		ALUMINUM	UHDER		W. 100 C.
100-250 HICROUS = 0		POTASSIUM	Unden	0.03	
*		SILICA	under		MG/ L
1	9.	CHLOHINE	EQUALS	0.0	HC/L
THIS REPORT FAILS THE REQUESTED ARALYS FOR STERILITY.	SIS .	STERILITY:			
			CTERIA =		-
cc: ED 'RIGHT, LS-EIG-32	_		COUNT =		
MSC PREVENTIVE Medicine Div., DC.	-7		C MIALYSI	_	
MSC CREW SYSTEMS JIV., EC-3 MSC LAUNCH SITE MEDICAL OPS. BRAD	non DDK	YEAST AN	D MOLDS =	HEGATI	VE.
NORTH PHERICAN ROCKUELL, Sommey,					
WORTH PRESIDENT MOUNTAINET,	CALIF.				
· ,		•			
Analyst Buck	Date C	ompleted	амов я 17 ,	1 (6)	
Approved by 12	Referen	ce Notebook			
P. LATE OF MOR. EUVICONMENTAL					
The state of the s					





Anaiya	s neport				
Requestor, Organization, Mail Code	Request	Date Noveme	na 13, 19	69	
H. Choskey, NAR ZK-96	Phone	867-51	82		
Sample Description	Analysis	Requested (Specific	ation Require	d)	
1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Alialysis	mequested (Specific	ation nequire	u ,	
APOLLO POTABLE WATER FROM HOT PORT, S/C 1-3, APOLLO 12, T-24 HOURS	PF SP	EC 1B TO TEST F	POINT 3		
טיים ויים אין האים ליים האים ליים אים היים			_		
Location					
PAD 3)P, 4C LEVEL					
					*11
Received by	Date	13/6 (15%)	Log Numb	63 11- 3	52H
Priority: Routine A.S./	۸.۲		Emergency		
ANALYSIS:		ICHIC SPECI	ES:		
PH = 6.7 @ 25°C		Canniun	UNDER	0.005	MG/L
To AL RESIDUE = 2.6 MG/L		CHROMIUM			MG/L
		Copper	UtiDER	0.05	MC/L
TASTE AND COOR = NONE @ THRESHOLD COOR N	0. 4	Inon	UNDER		MC/L
TURBIDITY = 0.3 Units		LEAD	Under		MO/L
Colos, TRUE = UNDER 5 UNITS		MANCANESE			MG/L
OCCUR, THUE - CHUER > CHITC		Mencuny	UNDER	_	HC/L
		NICKEL	_		MG/L MG/L
THIS REPORT FAILS THE REQUESTED ANALYSIS	FOR	SILVER Zinc	EQUALS		MG/L
STERILITY.		Machesium	-		MG/L
		CHLORIDE			MG/L
		Aconthum		0.5	MG/L
cc: En Veight, LS-ElG-32		POIASSIUN		0.03	MG/L
MSC PREVENTIVE MEDICINE DIV., DC-7 MSC CREW SYSTEMS DIV., EC-3		SILICA	UHDER	0.5	HO/L
INC LAURCH SITE MEDICAL OPS. BRANCE		CHLOSINE	EQU ALS	0.0	HG/L
NOTH MERICAN ROCKWELL, Downey, CA	LIF	STERILITY:			
		TOTAL BAC	TERIA = 00),000 COL. 30 ML	/
		COLIFORM	COUNT= NEC		
		ANAERODIC	/ HALYSIS	= HEGATI	VE
		YEAST AND	MoLos = i	EGATIVE	
* .					
,		8			
Analyst Buck	D	ate CompletedNo	VEMDER 17,	1069	
Alldryst L.)		are completed			
Approved by		eference Notebook _			
P. LATOIRE, MGR., ENVIRONMENTAL	HEALTH	ENGINEE ING			

APPENDIX B

APOLLO 12 CHAMBER TESTS

DATE	HOUR	EHE LOG NO.	ANALYSIS REQUESTED
5/2/69	0900	6905-6	STERILIZATION OF WATER DISPENSER No. 003 (NR)
5/5/69	1130	6905-10	GSE, TEST POINT TWO LM-6 (GAEC)
5/23/69	SEA LEVEL SI	MULATED TEST No.	1 (BACK-UP CREW) S/C 108
5/28/69	0830	6905-85	STERILIZING OF WATER DISPENSER No. 0003 (GAEC)
5/28/69	0500	6905-95	Final Fill, Test Point Three LM-6 (GAEC)
5/28/69	1000	6905-96	GSE, TEST POINT TWO S/C 108 (NR)
5/28/69	0800	6905-97	STERILIZING OF WATER DISPENSER No. 0004 (GAEC)
5/28/69	SEA LEVEL SI	NULATED TEST No.	2 (PRIME CREW) S/C 108
6/2/69	1330	6906-4	FINAL FILL, TEST POINT THREE S/C 108 (NR)
6/2/69		6906-6,8	LIQUID COOLING GARMENT NOS. 092 AND 093 (H-S)
6/3/69		6906-10	LIQUID COOLING GARMENT No. 096 (H-S)
6/3/69	SEA LEVEL SIN	NULATED TEST No.	1 (PRIME CREW) LM-6
6/3/69	UNMANNED ALT	ITUDE CHAMBER TES	ST S/C 108
6/4/69	0600	6906-11	T-24 HR TEST POINT THREE S/C 108 (NR)
6/4/69		6906-13	LIQUID COOLING GARMENT No. 092 (H-S)
6/4/69	1100	6906-14	STERILIZING OF WATER DISPENSER No. 0004 (GAEC)
6/6/69	SEA LEVEL SI	MULATED TEST No.	2 (BACK-UP CREW) LM-6
6/6/69	1800	6906-22	STERILIZING OF WATER DISPENSER GUN S/N 4136, FILTER No. 110
6/7/69	ALTITUDE CHAN	BER TEST No. 1 ((PRIME CREW) S/C 108
6/9/69	0700	6906-20 D,H	T-24 HR TEST POINT THREE S/C 108 (NR)
6/10/69	ALTITUDE CHAN	BER TEST No. 1	(BACK-UP CREW) S/C 108
6/11/69	UNMANNED ALT	TUDE CHAMBER TES	sт, LM-6
6/12/69	0630	6906-34	T-24 HR TEST POINT THREE LM-6 (GAEC)

DATE	HOUR	EHE LOG NO.	ANALYSIS REQUESTED
6/12/69	0930	6906-37	LIQUID COOLING GARMENT No. 092 (H-S)
6/12/69	1700	6906-39	LIQUID COOLING GARMENT No. 093 (H-S)
6/13/69	ALTITUDE CHAM	BER TEST No. 1 (PRIME CREW) LM-6
6/13/69	0800	6906-40	STERILIZING OF WATER DISPENSER S/N 4136 (NR)
6/13/69	1030	6906-41	LIQUID COOLING GARMENT No. 089
6/13/69	1330	6906-43,44	Post-Flight, Test Point Three S/C 108 (NR)
6/13/69	1715	6906-45	LIQUID COOLING GARMENT No. 096
6/13/69	2000	6906-46	STERILIZING OF WATER DISPENSER No. 0004 (GAEC)
6/16/69	ALTITUDE CHAM	BER TEST No. 2 ((BACK-UP CREW) LM-6
6/16/69	1730	6906-53	POST-FLIGHT, TEST POINT THREE LM-6 (GAEC)
6/17/18/69	UNMANNED ALTI	TUDE CHAMBER TES	ST LM-6



KSC ENVIRONMENTAL HEALTH ENGINEERING



. Analys	is Report
Requestor, Organization, Mail Code	Request Date May 2, 1969
D. Jolly - NAR ZE-36	Phone
	367–6200
Sample Description	Analysis Requested (Specification Required)
I/M Frink Dispenser Assembly S/N 003 Filtor S/N 102, Gun S/N 3459	CSD-A-372 Rev. A and DR-S/C 103 - FCS 0014
Location	
Environmental Health Laboratory	
Received by l	Date 110gr 2, 1969 (0909) Log Number 6905-6
Priority: Routine A.S.	A.P. Emergency
ANALYSIS:	
Final results following sterilization (org	mn4 mm (100 m1)
Port A: Negative Port B: Negative	
Port C: Negative	
Port A-GN2: Negative	
This sampling passes the requested anal	ysis.
·	
* .	*
,	**
Co: Ed Wright, IS-TNG-32 Pon Price, NEC Crew Systems Division	(m_3)
ISC Launch Site Medical Operations Br	
Harry Stewart (CCK-11)	(er.10)
Titter, Flight Crew Systems (mulity (R. Sauer, Preventive Medicine (DC-7)	
Analyst Buck	Date Completed 1969
Toproved by	Reference Notebook
Philip LaTorre, Hanager - Unviro	emental Heelth Engineering





Analysis Report Requestor, Organization, Mail Code Request Date May 5, 1969 J. PASSAMONTE, GAEC Phone 867-8590 Sample Description Analysis Requested (Specification Required) PF SPEC-1A TO TEST POINT 2 APOLLO POTABLE WATER FROM GSE LM-6 Location MSOB, CHAMBER R _ Date ______5/5/69 (1130) Received by ____ANDERSON _ Log Number 6905-10 Priority: Routine _ A.S.A.P. . (Due Date) IONIC SPECIES: ANALYSIS: PH = 6.8 @ 25°C CADMIUM UNDER 0.005 MG/L UNDER 0.05 CHROMIUM ELECTRICAL CONDUCTIVITY = 0.075 MICROMHOS/CM @ 250C COPPER UNDER 0.05 TOTAL RESIDUE = 0.5 Mg/L RON UNDER 0.1 LEAD UNDER 0.05 FIXED RESIDUE = UNDER 0.5 Mg/L UNDER 0.01 MANGANESE TASTE AND ODOR = None @ THRESHOLD No. 3 MERCURY UNDER 0.005 UNDER 0.05 NICKEL TURBIDITY = 0.2 UNITS SILVER UNDER 0.05 UNDER 0.03 Color, TRUE = UNDER 5 UNITS ZINC UNDER 0.005 MAGNESIUM PARTICULATES: IODIDE RESULTS TO FOLLOW 0-10 MICRONS = PASSES POTASSIUM UNDER 0.05 10-25 MICRONS = 19 UNDER 0.5 SILICA 25-50 MICRONS = 3 ALUMINUM RESULTS TO FOLLOW 50-100 microns = 1STERILITY: OVER 100 MICRONS = 0 TOTAL BACTERIA = 1500 col/100 ML COLIFORM COUNT = NEGATIVE THIS TEST PASSES THE REQUESTED ANALYSIS. ANAEROBIC ANALYSIS = NEGATIVE CC: ED WRIGHT, LS-ENG-32 YEAST AND MOLDS = NEGATIVE MSC CREW SYSTEMS DIVISION (EC-3) MSC Launch Site Medical Ops. Branch (DDK) MSC PREVENTIVE MEDICINE DIV. (DC-7) May 7, 1969 Buck Analyst _ Date Completed_ Approved by Reference Notebook __

P. LATORRE, MGR., ENVIRONMENTAL HEALTH ENGINEERING

DEMERYN JB

18.7



K S C ENVIRONMENTAL HEALTH ENGINEERING



Requestor, Organization, Mail Cod	9	Phone 867-2576		
GAEC 41				
Sample Description		Analysis Requested (Specific	cation Required)	
L/M Oning Dispenser Assembly S/N 6003 Filter S/N 100, Gun Location Environmental Healt	\$/11 3462	CSD-A-072 Rev. A / CSD-L15-35, DR030	WID.	
Received by Buck		Date 5-23-60 (9030)	Log Number6)05-35	
Priority: Routine		.A.P	Emergency	
ANALYSIS:				
FINAL RESULTS FOLLO	WING STERILIZATION	(ORGANISHS/100 HL)		
	TOTAL COURT	COLIFORN COURT		
PORT A:	HEGATIVE	Negat I ve		
PORT D:	NEGATIVE	Negat I ve		
PORT C:	liegati ve	NEGATIVE		
PORT A-CII2:	Negative	n/a		
THIS STERILIZATION	PASSES THE REQUEST	ED SPECIFICATIONS.		
NOTE: LODINE COICE	UTRATION HAINTAINE	O AT 95+ 5 PPN DURING	STERILIZATION.	
	CHEN SYSTEMS DIVI E NEDICAL OPERATION			
Buck Analyst		Date Completed	26, 1969	





Analysis nepolt					
Requestor, Organization, Mail Code	Request Date May 28, 1969				
I December CAFC	Phone	867-2945			
J. PASSAMONTE, GAEC	·	00/-25-15			
Sample Description	Analysis Requested (Specification Required)				
APOLLO POTABLE WATER, LM-6 FROM	Analysis reduced topoconistion required,				
DESCENT TANK, FINAL FILL FOR	PF SPEC 1A TO TES	T POINT 3			
CHAMBER TESTS					
Location	*				
MSOB, FLTITUDE CHAMBER R					
Received byBUCK	Date 5-28-59 (0500)	Log Number_6	905 -95		
Priority: Routine A.S./	A.P	Emergency			
(Due Date)					
ANALYSIS:	IONIC SPEC	IES:			
PH = 6.0 @ 25°C	CADMIUM	Under .005	HG/L		
TOTAL RESIDUE = UNDER 0.5 HG/L	CHRONIUM	under .05	MG/L		
TASTE AND ODOR - HOME @ THRESHOLD COOR N	Copper 1 Rou	UDDER .05	MG/L MG/L		
Control of	LEAD	UNDER .05	MG/L		
TURDIDITY = 0.2 UHITS	MAHICAHESE		MG/L		
COLOR, TRUE - UNDER 5 UNITS	Mencuny	under .008	MC/L		
PARTICULATE/500 HL	llickel Silver	UNDER .03	MG/L MG/L		
0-10 HICROIS = 200	Zinc	under .03	MG/L		
10-25 NICROUS = 115	MAGRESIUM		MG/L		
25-50 MICRONS = 41	loptor	UNDER .01	HC/L		
50-100 MICROUS = 13	ALUMINUM	UNDER .05	MG/L		
100-250 MICRONS - 14	POTASSIUM	C-111-2-1	MG/L		
OVER 250 MICRONS = 1*	SILICA	UNDER .5	MG/L		
	lodine	UNDER 0.1	MG/L		
*FIBER - 600 MICRONS	STERILITY	1			
THIS REPORT PASSES THE REQUESTED ANALYSI	•	ACTERIA = NEGATIV	F		
	COLLEGE COURT = BEGATIVE				
CC: EO WRIGHT, LS-EHG-32 AMARDORIC PURI VSIS = NEGATIVE					
MSC PREVENTIVE REDICINE DIVISION, DC-7					
MSC CREW SYSTEMS DIVISION - EC3					
MSC LAUNCH SITE MEDICAL OPS. BRANCH	- 500				
*					
Analyst Buck	_ Date Completed_	June 2, 1969			
Approved by	_ Reference Notebo	ok			
P. LATORRE. HGR. ENVIROUMENTAL HEALTH ENGINEERING					



KSC ENVIRONMENTAL HEALTH ENGINEERING



		Analysis Report				
Requestor, Organ	nization, Mail Code	Reques	t Date	25, 1		
J. PASSAI	mente, GAEC	Phone	0.7-4			
5. 15 100.000.000	THE WAVES LATE PROOF	Analysi	s Requested (Specific	ation Require	d)	
Fisc. 07 1 o Guada da 1	en, final Fill For ests	PF SP	EC 1'1 70 7607 P	107 3		
Location						
Hall g Litt	TTODE CHANDER IL					
Received by Duc	ж.	Date	3 - 60 (5500)	Log Num	ber <u>0.305 ~</u>)S
Priority: Rout	(Due Date)	A.S.A.P		Emergenc	y	
ANALYSIS:			ICHIC SPEC	ES:		
$pii = G_01$	୍ 25 ⁰ ¢		CADMIUM	EQUALS	.01	HG/L
			CHROMIUM	under	•05	nc/L
TOTAL DES	nove - 0.0 na/L		Coppen	Under	.1/5	MC/L
TASTE AUG	Upon - liene - Timesnor	LO COOR No. 3	Inon	UHDER	.1	nc/L
Turnenter	- 0.2 Units		LEAD	RHDEB	.05	MC/L
	A THE SECOND SECOND		MAUGANESE		•05	MC/L
COLOR, TI	ive - unden 5 Units		Meticury	OHDER	•008	MC/L
PARTICULA	TE/500 HL		NICKEL	UUDER	•05 es	HG/L
			SILVER .		.05	HC/L
	0-19 micaens = 200		Zinc Magnesium	equa ls		nc/L
	0-25 nichens - 62 25-50 nichens = 13		Tebibe		-	
	3-100 nicrons = 4		Leaning		.05	
	1-25: nichons = 24		POTASSIUM		05	ng/L
	250 nichons = 0		SILICA	UNDER	.5	nc/L
002.			lonine	Unden	0.1	MG/L
CHE PIDE						
		·	STERILITY			
Tuis need	ORT PASSES THE REQUESTE	D AMALYSIS.	Total Ca	CYERIA = I	ECATIVE	
				COUNT = 1		
	niem, LS-Ella-32	F-A -		C POALYSIS		IVE
	PREVENTIVE RESIGNED 31		YEAST AU	flotos =	HEGATIVE	
	Chen Systems division, Launch Site Medical Up.					
				Juna 2, 1	1969	
Analyst	2001		Jata Completed			
Approved by _	CENTRA		Reference Notebook _			

Cuentuen/nao

FORM OH-1



K S C ENVIRONMENTAL HEALTH ENGINEERING



Requestor, Organization, Mail Code	Request Date	y 28, 196)		
557				
H. C. SKCY, N/C ZKLGG	Phone	107 - 51/12		
Sample Description	Analysis Requested (Spec	fication Requir	ed)	
SPULLD POWABLE WATER S/C 100	•			
PILON TAGORD SUPPORT EQUIPMENT	F SPEC IN TO TEST	Sector 2		
Fon Change: 1887\$	7 5/26 IN 10 1451			
Location				
MSGO, ALTITUDE CHANDER L				
Received by Da	ite	Log Nun	nber	- 1.70
	P	Emergen	су	
Priority: Routine A.S.A.				
ANALYSIS:	TOUTE SPEC	IES:		
ELECTRICAL COMPUCTIVITY = 0.00 nichonnos/	cm Caeritun	บนออก		110/1
	Chachten	UNDER	•U5	HG/1
pil = 6.0	Coppen	UNDCA	•03	MC/
Total Gesides =.3 mg/500	. 1000	OHOUT	.1	nc/
	LEAD	Otide	•0.5	HC/
Finds Residue = N/A	Nynavarac	ôu o cu	•(3 : n	no/
TASTE AND COOR = None @ Thrasmold No. 3	Marconv	OHDHO	•0.35 	nc/
Tenerotty = 0.2 Gairs	Nicker	0000	ຸເສ 0•ເອ	ng/
	SILVES	unden. Unden	.03	ng/
Colon, Thus = enden 5 Units	Ziuc Magdesiun		.00 3	no/
PARTICULATES/500 IIL	Chlocase	Olio C	0.0	no/
	ALUMINON	unper	.05	nc/
C-13 MICTORS = PASSES	POTASSION	UNDER	.05	nc/
10-15 michons = 10 25-25 michons = 2	SILICA	OHOCA	•5	HC/
20-140 Michons = 1				
cyat 100 nichous = 0	STECHLITY	1		
THIS BUPORY PASSOS, THE BEQUESTED AMALYSI	S. COLIFGIA	TOTAL DACTEMA = 50,000 col/100 (
cc: Co Mather, 18-740-32	YEAST A	ANAERODIC ANALYSIS = NEGATIVE YEAST AND NOLDS = NEGATIVE		
NOC CAME SYSTEMS OFFICER, COLD NOC LAMBOR SITE RESIDENT OPS, DEARCH DOSTH FREDICAN ROCHMELL, DOMEY, CA	, DDK Life			
	•			
Duck		Jone - 2;	TAGE	
Analyst	_ Date Completed_			
	Reference Notebo	-		

COMMITTING AND



K S C ENVIRONMENTAL HEALTH ENGINEERING



160	A	nalysis Report		
Requestor, Organization,	Mail Code	Request Date		
1. W.M. 1.*25 1. 18-71		Phone 307-3374		
Sample Description		Analysis Requested (Specification Required)		
Con Solo States 'sst it to have ton Solo oras, Fr		183-1-374, 100. A AND TPS #CSS-L16-86-0		
Location				
- Envinennental Dz	ALTO LABOUATEMY		94	
		Date <u>S-28-69</u> (9890) Log Number <u>C-S-</u>		
Priority: Routine	(Due Date)	A.S.A.P. Emergency		
ANALYSIS: Final desults ro	LLOWING STEPILIZATION	(ongautans/100 mr)		
	TOYAL CODUT	Corntonia Comit		
Pour F	GEGATIVE	hegati ve		
POUT U	liega ti ve	hegati ve		
Pour C .	DEGATIVE	HEGATIVE		
Post A-City	HECATIVE	u/n		
Tins StearLizati	ON PASSES THE REQUEST!	ED SPECIFICATIONS.		
MSC LAUNCH HARRY STEMA	MSC CREW Systems Div. Site Medical Operation	us Baauch (DDK)		
Analyst	Minte	Date Completed 11AY 31, 1363		
Approved by	delland	Reference Notebook		
	coet, Nea., Envisonna	DTAL DEALTH ENGINEERING		





Requestor, Organization, Mail Code	Request Date			
	nequest Date	June 2, 1969		
IL Choskey, MAR ZK-96	Phone	Phone 7-5182		
Sample Description	Analysis Requested (S	Analysis Requested (Specification Required)		
APOLLO POTABLE MAYER	~			
CH 108, APOLLO 12	AP 0000 11	nam Carren m		
FIDAL FILL, DRIOR GOD	PF SPEC 1A TO T	EST POINT 5	24	
Location				
ALTITUDE CHANDER L, HSCB			12	
Received by Deneny	Date	Log Number. 5	M6-44	
	A.S.A.P			
Priority: Routine (Due Date)				
ANALYSIS:				
DRITTE GUT AND HOSE REMOVED FOR LEAK RE	PAIR. SAMPLE HALVES	PER NAR-		
DATES GOT HED THOSE RETOVED FOR EENE RE	ming omnibe mideo	. w		
	• •			
	*			
v ·				
cc: LS-ENG-52		÷		
DC-7, MSC Preventive Medicine Div				
EC-3, MSC Cheu Systems Div.				
DOK, HISC LAUDEN SITE MEDICAL OPS HORTH FMERICAN ROCKWELL, DOWNEY,				
t				
	*.			
		*		
•	*	,	•	
	,			
.'		5		
Analyst Analyst	Date Completed	Jung 9, 1969		
	1 Date Completed			
Approved by	Reference Noteb			





Anarys	is Report		
Requestor, Organization, Mail Code	Phone 7-5132		
H. Croskey, MAR ZK-86			
Sample Description	Analysis Requested (Specification Required)		
Apollo Potable Water CM 103, Apollo 12 Frual Fill, Waste Tauk	PARTICLE COURT & TOTAL SOLIDS FOR BIGINEERING EVALUATION		
ALTITUDE CHANGER L, MSCD			
Received by DECIENY	Date 6/2/50 (1330)	Log Number_GDOG =4}	
	A.P	Emergency	
ANALYSIS:	, , ,		
TOTAL RESIDUE = 1 ng/L			
PARTICULATE/500 ML			
0-10 michous = Passes	,		
10-25 nicnous = 126			
25-50 MICROUS = 24	*		
50-100 menous = 4	# #		
100-250 MECROUS = 0			
cc: LS-ElG-32	• • •		
		* · ·	
	· .	. *	
Apatus Analyst	Date Completed	ян е 9, 1 969	
Approved by P. LATORRE, Hore, Environmental h	_ Reference Notebook		





Requestor, Organization, Mail Code	Request Date June 2, 1960
N. Choskey, NAR ZK-06	Phone 7-5102
Samula Description	Analysis Requested (Specification Required)
Sample Description APOLLO POTABLE VATER	Analysis nequested topolitication magazine,
Cit 100, /pollo 12, Final Fill	
Not Water Port	PF SPEC IA TO TEST POINT 3
Location	
ALTITUDE CHANDER L, MS08	
Received by CENERY Date	
Priority: Routine A.S.A.F	P Emergency
(Due Date)	
ANALYSIS:	TONIC SPECTES:
PH = 6.4 ⊕ 25°C	Caphion upper .01 mc/L
TOTAL RESIDUE = 2.6 Mc/L	Concerton under 0.01 Hc/L
	Copper EQUALS .07 HG/t
TASTE AND COOR = None @ THRESHOLD COOR No. 3	G (45°C) Inon - under .1 HG/L LEAD - under 0.005 HG/L
Tunbibity = 0.5 Units	Hangahese under .01 mg/c
Colon, TRUE = UNDER 5 UNITS	HERCURY UNDER 0.91 HG/E
Coron, Inde - Chorn - Chirt	NICKEL EQUALS .3 MO/E
* * **	SILVER UNDER .05 MG/L
THIS REPORT FAILS THE REQUESTED ANALYSIS FOR	Zinc Equals .05 mc/t
STERILITY.	Mangestun Equals .02 Mc/t
CC: ED MACOT, LS-ENG-32	ALUMINON UNDER 10 NG/1
11SC PREVENTIVE RESIDENCE DIV., XX-7	Potassium unden .65 nc/i
MSC CREW SYSTEMS DIV., EC-3	SILICA UNDER .5 HG/H
MSC LAUNCH SITE MEDICAL OPS. BRANCH, DE	
HORTH AMERICAN ROCKWELL, JOHNEY, CALIF.	STERILITY:
	TOTAL BACTERIA = 80,000 col/100
, .	COLIFORN COURT = DEGATIVE
	FUARRODIC FUALYSIS = HEGATIVE
	YEAST AND HOLDS = NEGATIVE
ADRIES	June 9, 1969
Analyst	Date Completed
Approved by	Reference Notebook
P. LATORGE NOR - ENVIRONMENTAL HE	ALTH LIIGHDEERING





Analy	ysis Report
Requestor, Organization, Mail Code	Request Date June 2, 1969
JEFF RODERTS	Phone
HAMILTON-STANDARD	7-4000
Sample Description	Analysis Requested (Specification Required)
HIGH PURITY TATER	SPEC-C-27
LCG #002	Conductivity And Purity
EGG ITOSE	SCHOOL THE TANK TOWN
Location	
ECS Building	
Received by ADKINS	Date 6-2-69 Log Number 6906-1:6
Priority: Pouting	S.A.P Emergency
Priority: Routine A.S	S.A.F Linesgency
ANALYSIS:	
ELECTRICAL CONDUCTIVITY = .37 HICROPHIOS	s/cn ○ 25 ⁰ C
PARTICULATE/500 ML	
-7	/
0-169 MICRONS = PASSES	·
160-200 MICRONS = 1	
200-250 MICRONS = 0	. / in
Over 250 microns = 0	
THIS SAMPLE PASSES THE REQUESTED ANALYS	515.
Fig. 1	
	· · · · · · · · · · · · · · · · · · ·
* *, * *	
Pr	
· h	
Applyet	June 2, 1969 Date Completed
Analyst	Date Completed
Approved by & Milhum	Reference Notebook
P. LATORRE, Man., ENVIRONMENTAL I	HEALTH ENGINEERING





	Analysis Report	
Requestor, Organization, Mail Code	Request Date	6/2/69
JEFF ROBERTS	Phone	
HAMILTON -STANDARD		7-4009
Sample Description	Analysis Requested	(Specification Required) .
	0050 0 07	
HIGH PURITY LCG #093	SPEC-C-27 Conductivity,	PARTICULATE
Location		
ECS BLDG.		1
Received by - ADKINS	Date 6/2/69	6906-8 Log Number
Priority: Routine(Due Date)	A.S.A.P	Emergency
ANALYSIS:		
PH = 6.8		
CONDUCTIVITY = .65 MICROMHOS/CM @ 2	5°C.	
PARTICULATE:		
0-160 MICRONS = PASSES		
160-200 MICRONS = 0		
200-250 MICRONS = 0		
OVER 250 MICRONS = 0		
THIS SAMPLE PASSES THE REQUIRED ANA	LYSIS.	
*		
		*
	All C	
	lie.	
* ***		•
	, , , ,	
Analyst WRIGHT	Date Complete	6/2/69
Approved by . dadone	Reference Not	ebook
P. LATORRE, MGR., ENVI		





Requestor, Organization, Mail Code	Request Date	June 3, 1969	
JEFF ROBERTS Hamilton-Standard	Phone	7-4009	
Sample Description	Analysis Requested (Specification Required)	-176
LIQUID COOLING GARMENT LCG #096	SPEC-C-27 Conductivi	TY AND PURITY	
Location			
ECS BUILDING			
Received byADK INS	Date 6/3/69	Log Number 690	6-10
Priority: Routine (Due Date)	A.S.A.P	Emergency	
ANALYSIS:			
ELECTRICAL CONDUCTIVITY = .43 MICROMHO	os/cm @ 25 ⁰ C		
PARTICULATE/500 ML	• ,		
0-160 MICRONS = PASSES			
160-200 MICRONS = 0		į.	
200-250 MICRONS = 0 over 250 Microns = 0			
502 250 3110			
			٠.
	¥i	,	
WRIGHT		June 4, 1969	
Analyst 7	Date Complete		-
Approved by	Reference Note	book	1 1 1





Requestor, Organization, Mail Code	Request Da	ite Juni	4, 1969		J.L.
H. Chosney, NAR ZK-06	Phone	7-51			
	A	16:	ian Danie	41	
Sample Description	Analysis R	equested (Specifica	tion Require	۵)	
APOLLO POTABLE UNTER CN 108, APOLLO 12, T-24 PRIME CREU DRIDE COD	PF SPEC	IA TO TEST PO	18 7 3		
Location		•			
ALTITUDE CHANDEN L, ASOB					
		-6-60 (0600)	Log Numb	er0000~	11
Priority: Routine A.S.	A.P		_ Emergency		
ANALYSIS:		ICHIC SPEC			
PII = 6.2 ○ 25°C		Cadmium	Ottoen	0.01	MG/E
TOTAL RESIDUE = UNDER 1.0 mg/L		Cuconium	Under	0.01	HG/
TASTE AND COOR = Hone @ THRESHOLD ODOR	IIo #	Coppen	UUDER	0.05	no/
	110. 5	1000	Under	0.1	MG/
Tundidity = 0.2 Units		LEAD	UUDER	0.05	mo/e
Colon, Toue = unden 5 Univs		Manganese Mencury	UDDER	0,01 0,01	nc/i
PARTICULATE/500 IL		DICKEL	UNDER	0.03	MC/I
		SILVER	UNDER	0.05	MG/I
0-10 MICROUS = PASSES		Ziac	EQUALS	0.1	HG/
10-25 microus = 26		HACHESTUM	UDDER	0.005	no/
25-50 microns = 11		CHLORIDE	EQUALS	0.0	MC/
50-100 michons = 3 160-250 michons = 2		ALUMINUM	OHDER	10	116/
100-250 MC::018 = 2		POTASSIUM	Unden	0.05	ng/
THIS REPORT FAILS THE REQUESTED ANALYSI	s	SILICA	unden	0.5	HC/
FOR STERILITY.	•	STERILITY:			
ees En lineaum 15 Stift 20		TOTAL BA	CTERIA =		
ASC PREVENTIVE REDICTED DIV., DC-7					100 M
ASC CAEM Systems Div., EC-3			Count =		
MSC LAUGER SITE REDICAL CPS. DRANG	n. 100K		/UALYS1		
HORYH FHERICAN HOCKUELL, DOLMEY, C		YEAST AIR	locos =	HEGATIV	E
a a a a a a a a a a a a a a a a a a a				e .	
Juen (18)		Ju	ie 6, 196	9 -	
Analyst		Completed		4	





Requestor, Organization, Mail Code	Request	Date	Juna 4, 100	59 -	
ii, Croskey, ndr Zii-90	Phone		7-5182		
Sample Description	Analysis	Requested (Specif	fication Requir	ed)	
APOLLO POTABLE MATER CH 106, APOLLO 12, T-24 PRIME CREW	PF SI	PEC IA TO TES	т Роцит З		
Location					
ALTITUDE CIMIDER L, MSO3					
Received by DEDERTY D	ate	(,udija15)) (3530) .	Log Num	ber6:250=	11
Priority: Routine A.S.A	.P		Emergenc	γ	
ANALYSIS:	, - ,	TONIC SPECT	25.		
PH = 6.2 @ 25°C	1	CADMIUM	UNDER	0.01	nc/c
TOTAL RESIDUE = 1.0 MG/L	•	Curontun	UNDER .	0.91	mc/t
	14.		· UNDER		MG/I
TASTE AND COOR = NONE @ TIMESHOLD ODOR	10. 3	Inon	onden	0.1	110/1
Tunginity = 0.3 Units		LEAD	UNDER	0.05	ng/i
Cot on Your wayners & Ibians		MANGANESE	UNDER		HG/I
Colon, True = Unen 5 Units		NICKEL.	EQUALS		no/
		SILVER	Utipen	0.05	HG/
THIS REPORT FAILS THE REQUESTED		Zinc	EQUALS	0.03	HC/
ABALYSIS FOR STERILITY.		Magnesium	The state of the s	0.02	MG/
		CHLORIDE		0.0	HC/
		ALUMINUM	ממסנוט	10	MG/
		POTASSIUM	กทอนธ	0.05	MC
		SILICA	UNDER	0.5	MG/
	٠,	STERILITYS			
	•		TERIA = 40 COUNT = NE		00 ML
ISC PREVENTIVE MEDICINE DIV., DC-7			HOLDS = H		ł
NOC LAUNCH SITE MEDICAL OPS. BRANCI NORTH AMERICAN ROCKVELL, DOWNEY, CA	ALIF.				#C
Analyst Duck 13			lune 6,-176	<u> </u>	- .
Analyst On a Color	. Da	te Completed			
Approved by	Re	ference Notebook.			





		Analysis Report		
Requestor, Organizatio	on, Mail Code	Request Date	June 4, 1969	
		Phone	-	
JEFF ROSERTS			7-4009	
HAMILTON-STAND	IANU			
ample Description		Analysis Requested (Specification Required)	
HIGH FURITY WA	TER	SPEC-C-27		
LCG #092	· • • • • • • • • • • • • • • • • • • •	CONDUCTIVI	TY AND PURITY	
ocation				
ECS Builaina				
Received by	# 5	Date6-4-69	Log Number	
Priority: Routine _		A.S.A.P.	Emergency	
	(Due Date)			
NALYSIS:				
WALISIS.				
ELECTRICA	AL CONDUCTIVITY = .º	44 міскомнов/см @ 25°С		
PARTICULA	ATE/500 ML			
PARTICULA	ATE/500 ML			
0-1	160 MICROHS = PASSE	•		
0-1 160-1	160 MICRONS = PASSE 200 MICRONS = 0	.		
0-1 160-2 200-3	160 HICROHS = PASSE 200 HICROHS = 0 250 HICROHS = 0	\$		
0-1 160-2 200-3	160 MICRONS = PASSE 200 MICRONS = 0			
0-1 160-2 200-3	160 HICROHS = PASSE 200 HICROHS = 0 250 HICROHS = 0			
0-1 160-2 200-3	160 HICROHS = PASSE 200 HICROHS = 0 250 HICROHS = 0			
0-1 160-2 200- 9ver	160 MICROHS = PASSE 200 MICROHS = 0 250 MICROHS = 0 250 MICRONS = 0			
0-1 160-2 200- over	160 HICROHS = PASSE 200 HICROHS = 0 250 HICROHS = 0			
0-1 160-2 200- over	160 MICROHS = PASSE 200 MICROHS = 0 250 MICROHS = 0 250 MICRONS = 0			
0-1 160-2 200- over	160 MICROHS = PASSE 200 MICROHS = 0 250 MICROHS = 0 250 MICRONS = 0			,
0-1 160-2 200- over	160 MICROHS = PASSE 200 MICROHS = 0 250 MICROHS = 0 250 MICRONS = 0			
0-1 160-2 200- over	160 MICROHS = PASSE 200 MICROHS = 0 250 MICROHS = 0 250 MICRONS = 0			
0-1 160-2 200- over	160 MICROHS = PASSE 200 MICROHS = 0 250 MICROHS = 0 250 MICRONS = 0			
0-1 160-2 200- over	160 MICROHS = PASSE 200 MICROHS = 0 250 MICROHS = 0 250 MICRONS = 0			
0-1 160-2 200- over	160 MICROHS = PASSE 200 MICROHS = 0 250 MICROHS = 0 250 MICRONS = 0			
0-1 160-2 200- over	160 MICROHS = PASSE 200 MICROHS = 0 250 MICROHS = 0 250 MICRONS = 0			
0-1 160-2 200- over	160 MICROHS = PASSE 200 MICROHS = 0 250 MICROHS = 0 250 MICRONS = 0			
0-1 160-2 200- over	160 MICROHS = PASSE 200 MICROHS = 0 250 MICROHS = 0 250 MICRONS = 0			
0-1 160-2 200- over	160 MICROHS = PASSE 200 MICROHS = 0 250 MICROHS = 0 250 MICRONS = 0			
0-1 160-2 200- over	160 MICROHS = PASSE 200 MICROHS = 0 250 MICROHS = 0 250 MICRONS = 0			
0-1 160-2 200- 9VER	160 MICROHS = PASSE 200 MICROHS = 0 250 MICROHS = 0 250 MICRONS = 0	ESTED AHALYSIS.	June 4, 1969	
0-1 160-2 200- over	160 MICRONS = PASSE 200 MICRONS = 0 250 MICRONS = 0 PLE PASSES THE REQU		Juna 4, 1969	





			Analysis Report	
Request	tor, Organiza	tion, Mail Code	Request Date	June 4, 1969
R. D.	ay, gaec -41		Phone	7-3574
L/H :	Description Description Description SM 4135,		Analysis Requested (Specific CSD-F-972, Rev. A AND CSD-LH-6-36-9	lication Required)
Location Euvy (HEALTH LADORATORY	•	
Receive	d by lic	Will ater	Date 6-4-69 (1100)	Log Number6306-14
Priority	: Routine	(Due Date)	A.S.A.P	Emergency
FINALY		FOLLOWING STERILIZATI	OU (ORGANISMS/100 HL)	
		TOTAL COUNT	COLIFORI COUNT	
PORT	A	NEGATIVE	NEGATIVE	m.
Poat	8	NECATIVE	NEGATIVE	
PORT	C	NEGATIVE	NEGATIVE	
PORT	A-GII2	NEGATIVE	N/A	
This	STERILIZ	ATION PASSES THE REQUE	STED SPECIFICATIONS.	
ccı	DON PRIC MSC LAUN R. SAUER HARRY ST	T, LS-ENG-32 E, NSC CREW SYSTEMS DI CH SITE MEDICAL OPS. B PREVENTIVE MEDICINE EUART (ECK-11) FLIGHT CREW SYSTEMS OF	Brauch (DDK)	
 Analyst	Buck		Date Completed	vus 6, 1969
Approve	ed by	of Allina	Reference Notebook	





Requestor, Organization, Ma	ail Code	Request Date	ne 6, 136)
B. Jolly, NAR ZK-05		Phone 7-	5102
Sample Description L/A Color of Special Assembly 3 - Con S/A 4136, Filty		Analysis Requested (Specific CSD=A=072, Rev. A And TPS=S/C 100 PPE	
Location Environmental Heat	TH LADORATORY		
Received by UUCIL		Date 6-6-69 (1096)	Log Number_6.006-2.2
Priority: Routine	(Due Date)	S.A.P	
ANALYSIS:			
	GWING STECILIZATION (O	RCAHISHS/100 ML)	
	TOTAL COUNT	Colifon	n Coour
Pont A	REGATIVE	NECATIV	E
Post B	NEGAT I VE	NEGATIV	E
Pont C	NEGATIVE	HEGATIV	C .
THIS STERILIZATION	PASSES THE REQUESTED	SPECIFICATIONS.	
ISC LAURCH ST IMBRY STEUMET R. SAUCH, PRE	C Chen Systems Div. (E Te hebical CPS. Deanch	(.XK)	
AnalystBuck //		Date Completed	au 12, 1957
Approved by	eas, Nos., Envisonment	Reference Notebook	



KSC



ENVIRONMENTAL HEALTH ENGINEERING **Analysis Report** Request Date Requestor, Organization, Mail Code June 5, 1969 H. CHOSKEY, WAR Phone 7-5102 Analysis Requested (Specification Required) Sample Description Apollo POTABLE DATER FROM S/C 108, James Con, T-25 nas PF SPEC 1A TO YEST POINT 3 DACKUP CHEW OF PPOLLO 12 Location ALTITUDE CHAMBER L. ASOD _ Date _6/3/63 (6788) Log Number (3 x) (with (1) Funguison, Unicht Received by ___ (Due Date) TOTAL SPECIES: ANALYSIS: ELECTRICAL CONDUCTIVITY = 1.2 micromos/cn @ 25°C Ungen .005 HOLL CADMIUM Unden .05 myL Chagnion PH = 7.2 € 25°C unden .05 mil t. Coppen ו. משטמט nVL. l non . TOTAL RESIDUE = 2.5 nc/L LEAD UNDER .US Mil TASTE AND ODER = None - Transmous Coon No. 3 nc/L EQUALS .UI MARGARESE Hencony under .005 nort. TORDIDITY = 3.5 Carrs HICKEL EQUALS . 13 ma/L COLOR, THUE = UNDER 5 Units SILVER BUDER .05 HO/L EQUALS .05 m/L Zinc PARTICULATE/500 nL& MAGNESIUM EQUALS .UG NOVL (1-10 michons = PASSED 0.0 HC/ L . CHLO. SDC 10-25 m crons = 1230 unden 1 Atomicon HC/L 25-50 michons = 210 POTASSION UNDER .05 110/1 50-100 mtcnens = 50 under .5 MG/L SILICA 103-250 menous = 5 STEETLITY: FILTER COVERED BY SHALL YELLOW PARTICLES. TOTAL DACTERIA = 550,000 CCL/ THIS REPORT FAILS THE REQUESTED ANALYSIS FOR STEELLITY. COLIFORN COUNT = MEGATIVE functionic funlysis = ligentive cc: Ep Uniont, LS-EUG-32 YEAST AND HOLDS = HECATIVE HIC PRESENTIVE MEDICINE DIV., DC-7 HSC CHEM SYSTEMS DIV., EC-3 ISC LAUGED SITE GEDICAL OPS. BRANCH, EX HOLTH THEOLOGIC HOCKWELL, DOLAIEY, CALIF. June 12, 1909 Duck // Date Completed_

Reference Notebook _

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR.

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	, An	elysis Report				
Requestor,	Organization, Mail Code	Request Date	Jone 5	, 1963		
7K-0	dioskey, NAR	Phone	7-510	2		
Sample De	scription	Analysis Requ	ested (Specification	n Required)		
Hor	PORT, T-25 HOURS, DACKUP CREU HOER TEST OF APOLLO 12	PF SPEC 1	IA TO TEST PO	lut S		
Location PLT1	TUDE CHANDEN L. MSCO			* .		,
Received b	y /gonesen, Unicur	_ Date ()	(670)	Log Number	6200-	2011
Priority:	Routine (Due Date)	A.S.A.P		Emergency_		
ANALYSIS	 S:		TONIC SPECI	ES:		
Tons Tons Tons Solo	TRICAL CONDUCTIVITY = 1.1 MICRONIC: 7.1 © 25°C TO AND ODOR = HOME © THRESHOLD ODO HOLLY = 0.9 Units HEPORT PAILS THE REQUESTED ANALY HILLY. ED Thicht, LS-ENG-32 HISC PREVENTIVE REDICINE DIV., EC.3 HISC CREW SYSTEMS DIV., EC.3 HISC LAURCH SITE HEBICAL OPS. BRANCH OPS. BRANCH RECEWELL, DOWNEY,	rsis Fon	CADMICH CHECHEN COPPER IRON LEAD IMPORTUSE MELICURY MICHEL SILVER ZINC MACHESION CHLORIDE ALUMINUM POTASSION SILICA STERILITY: TOTAL DAG COLIFORI ANAGRODIC YEAST AND	UNDER UNDER UNDER UNDER UNDER UNDER UNDER UNDER UNDER	.05 .05 .1 .55 .01 .05 .2 .05 .05 .05 .05 .05 .05 .05 .05 .05 .05	50 AL
	Buck 3		ompletedJU	 mg 12, 1:)G)	
Approved	20011.		ce Notebook			
Approved	.V. LATORIE, Tion., EDVIRONMENTAL					





Total Residue = .4 mg/L Taste and Odda = Roda Tameshold Odda Ro. 3 1000 000er 0.5 m Taste and Odda = Roda Tameshold Odda Ro. 3 1000 000er 0.1 m Taste and Odda = Roda Tameshold Odda Ro. 3 1000 000er 0.5 m Taste and Odda = Roda Tameshold Odda Ro. 3 1000 000er 0.5 m Taste and Odda = Roda Tameshold Odda Ro. 3 1000er 0.5 m Taste and Odda = Roda Tameshold Odda Ro. 3 1000er 0.5 m Taste and Odda = Roda Tameshold Odda Roda 0.5 m Taste and Odda = Roda Tameshold Odda Roda 0.5 m Taste and Odda = Roda Tameshold Odda Roda 0.5 m Taste and Odda = Roda Tameshold Odda Roda 0.5 m Taste and Odda = Roda Tameshold Odda Roda 0.5 m Taste and Odda Tameshold Odda Roda 0.5 m Taste and Odda Rod	Requestor, Organization, Mail Code	equest Da	te Juii	E 12, 19	59	
Analysis Requested (Specification Required) Procled Potable Date Charles Date Process Pro	J. Passamoute, GCEC	hone				
Procto potable dates from this descent Yarr, Tabe deems Location **PLITTORE Charges R, 1858 Received by Chartes: Date (12/4) (a20) Log Number (280-28) Priority: Routine Date (12/4) (a20) Log Number (280-28) **Priority: Routine Date (280-28) **Priority: Routine Dat			7-2) ¹ 15		
Descent Yark, T-26 needs	Sample Description A	nalysis Re	quested (Spec	ification Re	quired)	
Continue Company Com						
Companies Comp	Descent Taux, T-20 noons	F SPEC	1A to Tes	TOINT	5	
Received by Outstree: Date C/12/C/ (1820) Log Number C/18/C/ (1820) ASAP. Emergency ANALYSIS: ICHIC SPECIES:						
Priority: Routine Date C/13/C/ (RGG) Log Number C/13/C/ (RGG)	ocation		*			
ANALYSIS: Pin = 6.9 1 25	ALTITUDE CHAMDEN R, ISOB					
ANALYSIS: PH = 6.9 25°C Total Residue = .4 my/L Taste and Odda = Rode Temeshold Good Ro. 3 Lead onder 0.5 m	Received by Date	6/13/0	೨ (ಕಿದರಿ)	Log	Number6,8)(. -3 /}
ANALYSIS: ICHIC SPECIES:	Priority: Routine ASAP.			Emer	gency	
PARTICULATE/SUCH STREET AND CORRESPONDED COOR NO. 3 TOTAL RESIDUE = .4 mo/L Residue = .4 mo/	(Due Date)					
Total Residue = .4 mo/L Taste and Odda = Bone Timeshold Good Bo. 3 Totality = .25 Units Coepen Under .05 in Therefold Good Bo. 3 Totality = .25 Units Color, tage = under 5 Units Color, tage = under .05 in Therefold = .05	ANALYSIS:		ICHIC SPEC	IES:		
Total Residue = .4 mort Taste and Odog = Hone Threeshold Coor Ho. 3 Lead Odogr 0.1 A Tectioity = .25 Odits Lead Odogr 0.1 A Eclor, tabe = odder 5 Units Rangabese odder .45 A Particulate/555 ml Richard Odogr .45 M 6-10 michous = passes Rangabese odder .45 M 6-10 michous = 270 Rangabese odder .65 M 10-25 michous = 270 Rangabese odder .65 M 50-100 michous = 270 Rangabese odder .65 M 50-100 michous = 9 Rangabese odder .65 M 100-250 michous = 4 Potassion Odder .65 M 100-250 michous = 4 Potassion Odder .65 M This report fails the requested analysis Total Bacteria = 13 col/150 ml Col Ed Voicht, LS-EHR-32 Rangabese Ra	Pii = 6.9 (25°C					
TASTE AND ODGE = Hone Transhold Coor No. 3 Tocolotty = .25 Units Color, tage = coder 5 Units Particulate/555 ml Color, tage = coder 5 Units Color, tage = coder 6.1	Torn Decime = b nois					no/L
Tocolotty = .25 Juits Colon, toca = onder 5 Units Particulate/5.5 or ii. 0-10 micrors = passes 10-25 micrors = 270 25-50 micrors = 270 10-25 micrors = 9 100-250 micrors = 9 100-250 micrors = 4 This report fails the acquested analysis For sterility. Colon Streen Street Redical Case Branch, DEK Duck Street Redical Case Branch, DEK Colon Street Redical Case	age by the cases — Symmetry to the control — 1990 (1) any to € 19					110/E
Colon, tage = onder 5 Units Colon, tage = onder 5 Units Particulate/555 ml 6-10 microus = passes 10-25 microus = 270 25-50 microus = 76 100106 under 0.5 m Solved under 0.5 m Addresion under 0.5 m Colon microus = 4 Potassiun under 0.5 m Silica under 0.1 m Sterility: Colon sterility. Colon court = Recative Addresole foalysis = Decative Addresole foalysis = Decative Yeast ald Nolds = Necative Yeast ald Nolds = Necative Yeast ald Nolds = Necative Ouge 13, 1930	TASTE AND ODOR = Hone O Tuneshold Cook No.					HO/L
Color, tode = onder 5 Units Particulate/555 ml 6-10 microus = passes 10-25 microus = 270 25-50 microus = 70 100-250 microus = 9 100-250 microus = 9 100-250 microus = 9 100-250 microus = 4 This report falls the econested analysis For sterility. Co: En Unitar, LS-ENG-J2 MSC Crew Systems division, EC-3 MSC Launch Site Redical Ups. Beauch, DEX Code 13, 1930	Tecolotty = .25 Units					nc/t
PARTICULATE/553 BL 0-10 DICRORS = PASSES 10-25 DICRORS = 270 25-50 DICRORS = 76 100-25 DICRORS = 9 50-100 MICRORS = 9 100-250 DICRORS = 4 POTASSION UNDER 0.5 B SILICA UNDER 0.5 B COLIFORN COUNT = NEGATIVE ADARBOOIC FUALYSIS = NEGATIVE ADARBOOIC FUALYSIS = NEGATIVE YEAST ALD NOLDS = NEGATIVE YEAST ALD NOLDS = NEGATIVE OCHE 13, 1932	Coton your woman & there					n/t
This report fails the acquested analysis For Sterility. Silver under .05 in Zinc under .05 in Acquestion ender .05 in Acques						HO/L
0-10 michons = Passes 10-25 michons = 270 25-50 michons = 70 100106 under 0.5 m 1001250 michons = 9 1001250 michons = 4 1001250 michons = 0.5 m 1001250 michons = 4 1001250 michons = 0.5 m 100125 under 0.5 m Silica under 0.5 m Sil	PARTICULATE/550 HL					H. L
This report falls the requested analysis cu: En Valent, LS-EDU-D2 HSC Cheu Systems division, EC-3 HSC Launch Site Redical Ups. Beauch, DEK Magnesion Budgr .003 in loding ouder 0.1 in fluinten Goder 0.5 in fluinten Goder 0.5 in fluinten Goder 0.5 in fluinten Goder 0.5 in Silica Guder 0.5 in Silica Guder 0.1 in Sterility: Total Dacteria = 13 col/150 in Colifor Court = Negative Analogoic funlysis = Negative Yeast allo Nolds = Negative Yeast allo Nolds = Negative	0-10 michons = PASSES					HO/L
This report falls the requested analysis For Sterility. Cut En Voicht, LS-ENU-32 MSC Preventive Redicine Division, EC-3 MSC Launch Site Redical Ups. Branch, DEK Poyassiun under .05 in Silica under 0.5		i	LAGHESTUH	บแอะล	.003	ng/L
This report fails the requested analysis For Sterility. Co: En Uniont, LS-EN-32 MSC Crou Systems Division, EC-3 MSC Launch Site Redical Ups. Branch, DEK Potassium under .05 in Silica under 0.5 in Silica under 0.1 in Silica under 0.1 in Silica under 0.1 in Silica under 0.5 in Silic	25-50 microus = 70	1	lobina	UUDER	0.1	no/L
THIS REPORT FAILS THE REQUESTED ANALYSIS FOR STERLITY. STERLITY: TOTAL DACTERIA = 13 COL/150 ML COLIFORN COUNT = RECATIVE FUNDENCIAL PROPERTY = RECATIVE ANAEROODIC FUNLYSIS = RECATIVE YEAST AND ROLDS = RECATIVE PROPERTY = REPORT FOR THE PROPERTY FOR THE PROPERTY TOTAL DACTERIA = 13 COL/150 ML COLIFORN COUNT = RECATIVE YEAST AND ROLDS = RECATIVE PROPERTY FOR THE PROPERTY FOR THE PROPERTY TOTAL DACTERIA = 13 COL/150 ML COLIFORN COUNT = RECATIVE YEAST AND ROLDS = RECATIVE PROPERTY FOR THE PROPERTY FOR THE PROPERTY TOTAL DACTERIA = 13 COL/150 ML COLIFORN COUNT = RECATIVE YEAST AND ROLDS = RECATIVE PROPERTY FOR THE PROPERTY FOR THE PROPERTY TOTAL DACTERIA = 13 COL/150 ML COLIFORN COUNT = RECATIVE YEAST AND ROLDS = RECATIVE PROPERTY FOR THE PROPERTY FOR THE PROPERTY TOTAL DACTERIA = 13 COL/150 ML COLIFORN COUNT = RECATIVE YEAST AND ROLDS = RECATIVE PROPERTY FOR THE PROPERTY FOR THE PROPERTY TOTAL DACTERIA = 13 COL/150 ML COLIFORN COUNT = RECATIVE YEAST AND ROLDS = RECATIVE OF THE PROPERTY FOR THE PROPERTY TOTAL DACTERIA = 13 COL/150 ML COLIFORN COUNT = RECATIVE YEAST AND ROLDS = RECATIVE OF THE PROPERTY FOR THE PROPERTY TOTAL DACTERIA = 13 COL/150 ML COLIFORN COUNT = RECATIVE YEAST AND ROLDS = RECATIVE OF THE PROPERTY FOR THE PROPERTY TOTAL DACTERIA = 13 COL/150 ML COLIFORN COUNT = RECATIVE YEAST AND ROLDS = RECATIVE OF THE PROPERTY FOR THE PROPERTY TOTAL DACTERIA = 13 COL/150 ML COLIFORN COUNT = RECATIVE YEAST AND ROLDS = RECATIVE OF THE PROPERTY FOR THE PROPERTY TOTAL DACTERIA = 13 COL/150 ML COLIFORN COUNT = RECATIVE YEAST AND ROLDS = RECATIVE OF THE PROPERTY FOR THE PROPERTY TOTAL DACTERIA = 13 COL/150 ML COLIFORN COUNT TOTA	50-100 micheus = 0	4	Lummun			MO/ L
THIS REPORT FAILS THE REQUESTED ANALYSIS FOR STERILITY: STERILITY: TOTAL BACTERIA = 13 COL/150 ML COLIFORN COUNT = RECATIVE ANARGODIC FUALYSIS = RECATIVE YEAST ALD ROLDS = RECATIVE PURE LAUNCH SITE REDICAL UPS. BRANCH, DEK	100-250 nicaous = 4		'oyassium			no/L
FOR STERILITY: STERILITY: TOTAL BACTERIA = 13 COL/150 HL COLIFORN COURT = REGATIVE ADDRESS OF PROPERTIES DIVISION, X-7 INSC CARD Systems Division, EC-3 INSC LAUNCH SITE REDICAL UPS. BRANCH, DEC.				UNDER		no/ L
Total Bacteria = 13 col/150 ML Coliforn Count = Megative Augmendic Fualvais = Megative Yeast and Molds = Megative Yeast and Molds = Megative Yeast and Molds = Megative Duck Launch Site Medical Ups. Branch, Dex	THIS REPORT FAILS THE REQUESTED ANALYSIS		loging	ULIDER	0.1	ng/ t
COLIFORN COUNT = NEGATIVE AUAERODIC FUALYSIS = NEGATIVE PLAST ALD NOLDS = NEGATIVE	FOR STERILITY.	., 3	Sterility:			
COLIFORN COUNT = NEGATIVE AUAERODIC FUALYSIS = NEGATIVE PLAST ALD NOLDS = NEGATIVE			TOTAL BAC	TERIA =	13 coL/15	3 ML
Cor En Union, LS-ENU-32 HSC PREVENTIVE REDICINE DIVISION, X-7 HSC Crew Systems Division, EC-3 HSC Launch Site Redical Ups. Branch, DEK Duck RS Courses Redical Ups. Branch, DEK	•					
ASC CARRESTIVE ACCIONATION, EC-3 ASC CARREST REDICAL UPS. BRADEN, DEK						I VE
ASC CARR SYSTEMS DIVISION, EC-3 ASC LAUNCH SITE REDICAL UPS. BRADON, DEK		-	YEAST ALD	HOLDS =	HEGATIVE	
Duck Str Redical Cps. Branch, DEK		1				
Duct: 36		1137				
Analyst Date Complete: OURE 13, 1930	HOU LAUDER SITE REDICAL CPS. BRANCH,	LECKY				
Analyst Duck // Date Complete: 000E 13, 1930						
Analyst Date Complete Date Complete	Provide Advantage Control Cont				3, 1969	
	Analyst	Date	Complete :			
Approved by Reference Notebook		n .				



KSC



L trim	HEALTH ENGINEERING Spis Report	
Requestor, Organization, Mail Code	Request Date	June 12, 1969
JEFF RODERTS	Phone	
HAMILTON-STANDARD		7-1009
Sample Description	Analysis Requested (Spec	cification Required)
HIGH PUBLITY MATER	SPEC C-27 FOR CO	IDUCTIVITY AND
LCG #032	PARTICULATE	
ocation	1 .	
ECS Building	,	
Received by Anderson	Date 6/12/62 (0030)	Log Number6光6-37
Priority: Routine A.S		
(Die Date)		
ANALYSIS:	,	
	/ 0 or0e	
ELECTRICAL CONDUCTIVITY = 0.35 HICRONHOS	/CH (25°C	
PARTICULATE:		
RANGE		
DANGE		
0-160 MICROUS = PASSES		
160-200 MICROUS = 0 200-250 MICROUS = 0		
OVER 250 HICRORS = 0		
	*	
THIS SAMPLE PASSES THE REQUESTED ANALYSI	S-	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
•		
	•	June 12 1960
Analyst	Date Completed	June 12, 1969
An denson		





All	ialysis neport				
Requestor, Organization, Mail Code	Request Date 6/12/69				
JEFF ROBERTS	Phone				
Hamilton-Standard	7-4009				
County Description	Analysis Described (Consideration Described)	_			
Sample Description	Analysis Requested (Specification Required)				
HIGH PURITY WATER	SPEC-C-27				
LCG #093	FOR CONDUCTIVITY AND PARTICULATE				
Location	-				
ECS BUILDING					
Buck	Data 6/12/69 (1700) Los Number 6906-39	-			
Received by	Date Log Number	_			
Priority: Routine /	A.S.A.P Emergency	_			
ANALYSIS:					
	•				
ELECTRICAL CONDUCTIVITY = 0.22 MICROM	HOS/CM @ 25°C				
Particulate:	·				
PARTICULATE:	•				
0-160 MICRONS = PASSES					
160-200 MICRONS = 1					
200-250 MICRONS = 1 over 250 MICRONS = 0	*				
OVER 250 MICRORS = 0					
-					
	•				
Analyst An DER SON	Date Completed6-12-69				
$() \times 2$					
Approved by P. LaToppe McP. FNV LPON	Reference Notebook	-			
P LATARRE MCR. FNVIRON	MENTAL OF ALTH ENGINEEKING				





Anal	ysis Report
Requestor, Organization, Mail Code	Request Date June 13, 1969
D. Jolly, NAR ZK-86	Phone 7-5192
Sample Description L/N United at Spensen Cun S/N 4136	Analysis Requested (Specification Required) CS9-A-672, REV. A AND TPS-SC108-FCS035
Location	
ENVICONMENTAL HEALTH LABORATORY	
•	Date 6/13/62 (0000) Log Number 6000-4/0
Priority: Routine A.S.	S.A.P Emergency
ANALYSIS:	
	((10) m)
FIRM RESULTS FOLLOWING STERILIZATION	(ORGADISMS/IU) ML)
TOTAL COUNT	
PORT A NEGATIVE	
PORT B NEGATIVE	
PORT C . HEGATIVE	
PORT A-CII ₂ NEGATIVE	
This sterilization passes the requests no filter, was sterilized.	ED SPECIFICATIONS. ONLY THE DRINK DISPENSER,
CC: ED MRIGHT, LS-ENG-32 DON PRICE, NSC CREW SYS. DIV., EL NSC LAUNCH SITE NED. OPS. BRANCH NARRY STEWART, ECK-11 R. SAUEN, PREVENTIVE MEDICINE, DI TITTER, FLIGHT CREW SYS. QUALITY	, DAK C-7
Analyst	Date Completed June 19, 1969
Approved by	Reference Notebook
P. LATORRE, Mar., Environmenta	



FORM OH-1



Requestor, Organization, Mail Code	Request Date	June 13, 1969	
JEFF ROBERTS	Phone .		
HAMILTON-STANDARD		7-4009	
Sample Description	Analysis Requested	(Specification Required)	•
High Purity Water LCG #030	SPEC C-27 FOR PARTICULATE	CONDUCTIVITY AND	
Location			
ECS Building			
Received by WRIGHT	Date _6/13/60 (103	6905-	11
Priority: Routine(Due Date)	A.S.A.P	Emergency	
ANALYSIS:			7-14
PARTICULATE/500 ML 0-160 MICRONS = PASSES 160-200 MICRONS = 0 200-250 MICRONS = 0 over 250 MICRONS = 0			
THIS SAMPLE PASSES THE REQUESTED	MIALYSIS.		
	· 1		
Analyst Buck	Date Complete	June 13, 1969	
Approved by P. LATORRE, MGR., ENVIRO	Reference Not	ebook	





	Analys	is Repor	t		
Requestor,	Organization, Mail Code	Reque	st Date	luns 13, 1969	
IL Cnos XC-36	KEY, NAR	Phone		2-51 02	
S/C	cription LO WATER FROM WASTE TAUK 100, FROLLO 12 FLIGHT	Analysis Requested (Specification Required) PF SPEC 1A TO YEST POINT 3 PER DEQUESTED ANALYSIS			
Location	Cmann 1603D				<u> </u>
1557	STAND, ASOB	<u> </u>	13,60 (1330)	Fr. 1	July3
Received b	70CIL	Date	13/02 (1330)	Log Number	
Priority:	Routine A.S.	A.P		Emergency	
ANALYSIS		-, -, -	ICHIC SPECI	ES:	
	€, 0 ⊖ 25°c		CADALUM		nc/L
	L Respue = 4.2 Hg/L		Concerton	unoca 0.05	nc/L
	C AND ODOR = NORE O THRESHOLD OROR	llo 3		unoga 0.05	
			LEAD	Unoen 0.1 Unoen 0.05	
โบแบ	IDITY = 3.6 UNITS			under 0.01	MO/L
COLO	n, Thue = under 5 Units		Hencony		nc/L
Diss	ct vea Gaygen = 36 mg/L		NICKEL	EQUALS 0.1	ne/ L
, ,,,,,				Unden 0.05	nc/L
				EQUALS 1.0	no/L
CC:	ED VRIGHT, LS-ENG-32		Hagnes i un Chlori de	EQUALS .02	ng/L
	MSC PREVENTIVE NED. DIV., DC-7		ALONIOUM		no/L
	ASC CREU SYS. BIV., EC-3 ASC LAURCH SITE RED. UPS. BRANCH,	10	POTASSIUM		MG/L
	NORTH AMERICAN ROCKVELL, DOWNEY, (SILICA		HC/L
		••,			
				4	
					- 33
	Duca 77 8	,-		Jone 19, 1969	
Analyst	1 1 1	_	Date Completed		
Approved			Reference Notebook		
	P. LATORRE, HOP., HIVI HOUNESTAL	HEALT	ru Engineeding	*	

Coentnen/030

FORM OH-1





Analys	is Report				
Requestor, Organization, Mail Code	Request Date Jone 15, 1565				
ii. Choskey, nar 2K-86	Phone	7-510	2	-	,
Sample Description APOLLO WATER FROM POTABLE TARK OF S/C 100, APOLLO 12 POST FLIGHT (DRIVE CUN NOT ATTACHED)		uested (Specificat			76 0
Location Test Stano, MSOD		,			
Received by	Oate) (1500)	. Log Numbe	r_6.20-5.4	γIγ
	A.P		. Emergency.		
ANALYSIS:		TOUTE SPECT	ES:		
TOTAL RESIDUE = 0.0 mg/L TASTE AND CROR = None O THRESHOLD COOR I TORRIBITY = 0.00 Units Color, thue = under 5 Units Dissolved Crycen = 20 mg/L This report passes the requested analys CC: ED Union, LS-ENG-32 MSC Preventive Ned. Div., DC-7 MSC Creu Sys. Div., EC-3 MSC Ladich Site Ned. Ops. Branch, North American Rockwell, Jouriey, C.	18. 30K	CADMISM CORPED LOOD LEAD MADGADESE MERCURY BICKEL SILVER ZIDC MAGDESION COLORIDE ALORIDON POTASSION SILICA	under Equals Under Equals Equals	.005 0.05 0.05 0.1 0.05 0.05 0.05 0.05 0	#6/L #6/L #6/L #6/L #6/L #6/L #6/L #6/L
	-		19, 1969		
Approved by P. LATORRE, FIGR., EUVIROUMUITA	_ Referen	ompleted	13, 1903		





A =	nalysis Report	
Requestor, Organization, Mail Code	Request Date	6/13/69
	Phone	
JEFF ROBERTS, HAMILTON-STANDARD		7-4009
Sample Description	Analysis Requested (Specific	cation Required)
HIGH PURITY WATER LCG #096	SPEC-C-27 FOR CONDU PARTICULATE	CTIVITY AND
Location		
ECS BUILDING		
Received byBuck	Date 6/13/69 (1715)	Log Number6906-45
	A.S.A.P	
ANALYSIS:		
ELECTRICAL CONDUCTIVITY = 0.3 MICROM	ноs/см @ 25 ⁰ С	
PARTICULATE/500 ML		
0-160 MICRONS = PASSES 160-200 MICRONS = 0		
200-250 MICRONS = 0		
OVER 250 MICRONS = 0	*	
THIS SAMPLE PASSES THE REQUESTED ANAL	LYSIS.	
	-	
A. P. Buck	D	6/13/69
Analyst	Date Completed	-11
Approved by T. Jackson	Reference Notabook _	
P. LATORRE, MGR., ENVIRONME	ENTAL HEALTH ENGINEERING	





		Analysis Report	
Requestor, Organiz	ation, Mail Code	Request Date	me 13, 1969
R. DAY, GA	EC	Phone	-5574
ample Description		Analysis Requested (Specific	cation Required)
Assenouy	Digrauser Lula Su, Filten S/N 105	CSO-A-672, Rev. A ADD LIG-TPS-CSO-11	
Environmen	TAL HEALTH LABOLATORY		
Received by	Duck	Date 0/13/00 (2000)	Log Number6006 ≥46
		A.S.A.P	
	(Due Date)		
ANALYSIS:		* ;	
FINAL DESC	LTS FOLLOWING STERILIZA	TION (GREADISHS/100 HL)	
	TOTAL COURT		
PORT A	HEGATIVE		
Fort B	MECATIVE		
Pont C	Hega t i ve		
Tuis steri	LIZATION PASSES THE REQ	UESTED SPECIFICATIONS.	
Dou" MSC Hann	nicum, LS-EUC-32 Price, MSC Cheu Sys. Div Launch Site Med. Ops. Dr y Steuant, ECK-11 Auen, Preventive Medicin	AUGH, DAK	,
	JCR		 /19/62
Analyst	1 1 7.	Date Completed	11.00
Approved by	11 1. 1	Reference Notebook	





Analy	ysis Report			•	
Requestor, Organization, Mail Code	Request Date	June 16	, 1969		
J. PASSANOUTE, CAEC	Phone				
		7- 2545			
Sample Description	Analysis Request	ted (Specification R	equired)		
APOLLO POTABLE WATER FROM LA-6	-				
APOLLO 12 ASSEST TANK (VITHOUT CUR	DE 0350 10	T D			
ATYACHED)	Pr Spec In	TO TEST POINT	9		
Location	-				
ALTITUDE CHANDER R. HSOD					
Received byCODITION	Date(/10/60	(1730) Log	Number	ú6 - 53	
	S.A.P				
(Due Date)					
ANALYSIS:	icnic	SPECIES:			
PH = 6.4 © 25°C	CADM		0.005		
TOTAL RESIDUE = 1.2 MG/L			0.05		
	Сорре				
TASTE AND ODOR = Hone @ THRESHOLD ODOR		บทอยก			
Tunbibity = 0.65 Units .	LEAD	Unden			
		nese under			
Cotor, True = under 5 Units	MERCU			HG/L	
PARTICULATE/500 ML	DICKE				
	SILVE		0.05 0.03		
0-10 nichous = Passes	Magne	UNDER	0.003		
10-25 archous = 301	10016		0.1		
25-50 niccous = 207		e under nun under	0.5		
50-100 nicnous = 57		SIUM UNDER			
100-250 nichons = 40	SILIC		0.5		
THIS REPORT FAILS THE REQUESTED ANALYSI	_		0.1	nc/L	
FOR STERILITY.	STERI	LITY:			
y * * *		AL DACTERIA =	1200 cm	/100 m	
cc: En Valeur, LS-EUG-52		IFORM COUNT #		1 1116	
HSC PREVENTIVE HED. DIV., DC-7		PHARRODIC FRALYSIS = NECATIVE			
ISC Caen Sys. Div., EC-3		ST AND HOLDS =			
HSC LAUNCH SITE MED. CPS. DRANCH,					
The Billion of the ridge of the State of					
×:					
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Ouck / /		June 19,	1.369		
Analyst	Date Com	oleted			
Approved by	Reference	Notebook			
P. LATORRE, HOR., ENVIRONMENTAL I	EALTH ENGINEER	IIIG			

FORM OH-1 CUENTHER/HJD

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DATE FILMED APR 3 1970